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The Retirement Income System
in Canada:
Problems and Alternative Policies for Reform

Volume I

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Task Force on Retirement Income Policy
1979



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The Retirement Income System

in Canada:

Problems and Alternative Policies for Reform

Volume I of the Report of the
Task Force on Retirement Income
Policy to the Government of Canada,
1979



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FOREWORD

In response to a growing concern among many groups about the current and future well-being of Canada's elderly, the federal government in 1976 established an interdepartmental task force of officials to undertake a study of the private and public retirement income system in this country.

Designated as the Task Force on Retirement Income Policy, the group sought to describe and evaluate the present retirement income system in Canada and to develop alternative approaches for resolving or minimizing the shortcomings in the system revealed by the analysis. The report of the Task Force did not adopt specific recommendations, but rather outlined a range of policy choices available to decision makers concerned with reforming the system now in place.

The Task Force functioned under the general direction of a steering committee of senior officers from the Departments of Finance, National Health and Welfare, Insurance and Labour and from the Privy Council Office and the Treasury Board Secretariat. The Task Force itself was headed by Harvey Lazar.

The following report to the federal government, for which the Task Force is responsible, is being made available to the public in the hope that it will improve public understanding and encourage public debate of possible reforms to the retirement income system.

THE RETIREMENT INCOME SYSTEM IN CANADA:
PROBLEMS AND ALTERNATIVE POLICIES FOR REFORM

VOLUME I

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PREFACE

At the beginning of the 19th century in Canada, such provisions as were made for old age could hardly be thought of as constituting a retirement income system. The economic conditions of that era were such that the typical rural family was hard pressed to earn enough for current needs, let alone set aside something for their later years.

Over the course of the century, a few employers began to provide pensions to retired employees who had rendered long periods of service. The federal government established a pension scheme for its permanent civil servants in 1870 and the Quebec government followed suit in 1876. Some private pension plans sponsored by employers or employees also began to emerge. But nothing approaching a national program existed before 1908, when the federal government established a national annuities program that included a modest element of subsidy in its interest rate provisions.

Thus, until at least the end of the 19th century, the norm for Canadian society was for people to work as long as possible. When they were no longer able to provide for themselves, their families were expected to support them. Failing that, the aged had to fall back on whatever assistance was provided through religious orders, local authorities, or private charity. It was widely held that those who had failed to save enough, and who were not supported by their families, deserved the bare subsistence that was their lot.⁽¹⁾

Although this essentially Darwinian view was widespread at the turn of the century, events were already well advanced which would serve eventually to undermine it. In the latter half of the 19th century, as the Canadian economy became increasingly industrialized, major changes took place in the working and living habits of much of the population. Younger workers moved from extended family units in rural areas to the cities and towns where new, mechanized industries were being established, or to more remote centres where new mines and other natural resource developments were opening up.

(1) Appendix 1 provides a brief history of the development of the Canadian retirement income system.

Two effects of this change merit attention. The first was that the extended family arrangement that had characterized much of Canada's pioneer society began to weaken. The second was that the members of the new industrial work force were not nearly as independent as the craftsmen they came gradually to displace; it was the employers who set the hours and other conditions of work. These conditions often required employees to retire at some specified age (often at 70), based at least in part on the assumption that, beyond that age, the employee was generally less able to maintain the desired standard of productivity. In this way, the process of industrialization helped set the stage for the evolution of the retirement income system that we know today.

At the same time, an important demographic change was occurring - life expectancies were increasing significantly due principally to the improved control of infectious disease.

These changes have had profound implications for the development of the retirement income system. Perhaps the most important is that the sheer size of the system has increased substantially. For the group that entered the labour force in the year 1900, for example, retirement years in aggregate probably represented well under 10% of their adult lives. For those entering now, the comparable figure - based on current legislation and practices - is expected to be more than double. Thus, more of society's resources now need to be directed to the retired population than formerly. This remains the case regardless of the particular institutional form taken by the retirement income system - that is, whether people save for retirement either individually or in groups, or whether they are supported by transfer payments either through the family or through government. To take the example of a system based on saving, if the group that entered the labour force in 1900 had set aside annually around 6% of its current earnings, those who survived until retirement would have generally had sufficient income to maintain themselves through retirement at the living standards to which they had grown accustomed. Today, perhaps two to three times that amount would be required because people retire earlier and live longer.(2)

In response to these changes, new institutional arrangements have been created to meet the income requirements of the elderly. While the family was the principal basis for support of the retired population at the turn of the century, government and former employers have assumed much of that role today. The national annuities program of 1908 was followed by the establishment in 1927 of a means-tested old age pension plan financed jointly by the federal and provincial governments. Today, about three-quarters of the reported money income of the elderly in Canada comes from former employers or governments, with by far the largest share provided through a number of federal government programs established since World War II.

(2)Data in support of these generalizations can be found in Appendix 18.

Despite all these changes, there is mounting evidence that Canadians are very worried about their retirement income system. Over the last several years, in particular, different groups have raised a number of concerns and questions about the existing system.

Concerns of Individuals

- . Will the money for my pension be there when I retire? What will my pension buy when I receive it?
- . I worked for ABC Company. I know the wages they pay at least keep up with inflation and the price of their products certainly keeps going up. But my pension doesn't increase. Why?
- . I would be willing to pay my share if I could participate in the Canada Pension Plan (CPP).(3) It's not fair that I'm not allowed to join just because I'm a homemaker.
- . I'm all alone with no private resources. How can I live on the old age pension I receive from the government?
- . Can I afford to change my job? What are the pension implications?
- . How will the fact that I've been laid off affect my pension?
- . I just can't understand the pension system.
- . I've paid a lot for pensions to different employers since I left school ten years ago, but I still don't have anything to show for it.
- . My husband worked for the government all his life. He had a good pension and I now get half of it, so I'm OK. My sister, though, is in real trouble. She had to sell the house after her husband died. The survivor's provision in his pension plan was worth next to nothing and all she has now is the house money and a little life insurance.

Concerns of Employers

- . What are our pension plans going to cost in future?
- . How can we be sure that the costs will not be higher than those estimated by our actuaries?
- . Our employees want the kind of pension plan governments offer their employees, but we can't afford such costly arrangements.

(3)All abbreviations used in this report are listed separately at the end of this volume.

- . It's all right for the big companies, but we are small. How can we cope with all the administrative difficulties of a pension plan?
- . We are sympathetic to the plight of our pensioners, but how can we possibly take the risk of promising that our pension will keep up with the cost of living?
- . If government 'takes over' pensions completely, it will be more difficult for business to raise funds in the capital markets.

Concerns of Governments and Others

- . Why is there such a high correlation between old age and poverty?
- . Why are so many of the poor elderly female?
- . Is it possible to achieve adequate incomes for the elderly by relying on individual initiative?
- . If economic growth slows and resources are less plentiful, will future generations be willing or able to pay the pensions being promised to today's labour force? When the baby boom generation moves into retirement, and increases significantly the proportion of the elderly in the population, will its children be able and prepared to pay for the pension benefits being promised now under Old Age Security (OAS) and the Canada and Quebec Pension Plans (C/QPP)?
- . Are today's pension funds being invested in a way that will strengthen tomorrow's economy or are they simply being used to finance consumption?
- . Are indexed pensions more expensive than the nation can afford?

These and other frequently heard questions and concerns can be categorized as follows:

1. The current retirement income system does not seem to be producing adequate amounts of income for many of the elderly. While views will undoubtedly differ about the appropriateness of the level and of the distribution of the income of the current elderly, it is probably the case that most Canadians of labour force age expect to be a good deal better off when they retire than are most of the elderly today.
2. Private pension coverage is far from complete. A substantial gap in coverage exists in the private sector. Consequently, many paid workers enter retirement either with no pension from their former employers, or only a very small one. In general, survivors are treated even worse. Also, many people are concerned that unpaid workers, including homemakers, are not covered adequately by public or private pension arrangements.

3. The employer-sponsored system handles portability badly. While it is often not understood why or how, it is widely and correctly perceived that moving 'matters', i.e. that mobile employees, and others whose labour force status changes frequently, will get much smaller pensions than will those who remain with one employer throughout their career. Women, in particular, are adversely affected by this deficiency.
4. The real values of many employer-sponsored pension plans have been eroded by inflation. During the past few years, when levels of inflation in Canada much exceeded historical norms, pension payments in some employer-sponsored plans have been left more or less unchanged. Therefore, the purchasing power of many pensioners has declined drastically.
5. The pension arrangements for public sector employees and elected representatives at the various levels of government are typically better than those in the private sector. The basic pension benefits (and also survivorship and other ancillary provisions) for elected representatives and public service employees at all levels, members of the Canadian Armed Forces, employees of Crown corporations, school teachers, policemen and employees of other institutions within the public sector are perceived generally, and correctly, as being larger than the benefits provided by the average private sector plan. Public sector pensions are also generally adjusted more fully for inflation than private sector pensions. Part, but only part, of this difference is accounted for by the fact that employee pension contributions in the public sector are generally higher than in the private sector.
6. The funding standards that the law generally requires of private employer-sponsored plans are frequently not followed by government-as-employer plans. This raises questions as to whether public service employees and their employers are today paying an appropriate amount for public employee pensions or whether costs are instead being shifted forward to tomorrow's taxpayers. What are the 'appropriate' financing arrangements for public employer-sponsored plans? Should the rules be the same for plans of public and private employers?
7. The financing arrangements for the Canada and Quebec Pension Plans require change. The issues raised in connection with government-as-employer plans occur also in relation to the C/QPP. Are the C/QPP financed appropriately? Should they be more fully funded or operate more on a pay-as-you-go basis?
8. The age of entitlement to pension benefits and current mandatory retirement practices need re-examination. Should there be greater flexibility in the rules governing age of entitlement to public pension benefits? Is a mandatory retirement age socially and economically desirable? Do the age of entitlement

provisions of OAS and C/QPP reinforce the practice of setting such 'cut-off' ages? Are employer-sponsored pension plans which provide some employees with unreduced pensions well below the age of 65 in the public interest?

Public concern over these issues has been reflected in several different developments. Over the past several years, a number of groups have urged that the scale of benefits provided under the Canada and Quebec Pension Plans be substantially enlarged. The Canadian Labour Congress, the Confederation of National Trade Unions, the Canadian Council on Social Development, and the Quebec Federation of Teachers - among others - are all on record as supporting expanded public plans. Their recommendations stem from the difficulties employer-sponsored plans appear to have in providing adequate coverage, in dealing with labour mobility and involuntary changes in labour force status, and in adjusting for inflation.

The Canadian Labour Congress has also called for a lowering of the age of entitlement to CPP benefits from age 65 to age 60 on an actuarially reduced basis. There have also been suggestions in the House of Commons and elsewhere in support of earlier entitlement to benefits. In some cases, the suggestion is that this right might be made conditional on withdrawal from the labour force.

Others have expressed concern about the costs associated with such proposals. Businessmen, particularly, are worried about the impact of such changes on the cost of their operations and about possible adverse effects on the overall performance of the economy.

The importance of these issues in both social and economic terms is difficult to over-estimate. It is not surprising, therefore, that they have come under extensive study by governments in recent years. The Government of Quebec appointed a study group of government officials and business, labour, and academic members in February 1976, to examine some of these issues. The report of this group, which became known as COFIRENTES+, was submitted to the provincial government in September 1977.(4) Among other things, it called for a substantial increase in the contribution rate for the QPP, assuming the current QPP benefit levels remain unchanged, to cover both liabilities that are already outstanding and those that will be incurred in the future. The study also proposed higher QPP benefit levels, which in turn would require further increases in the QPP contribution rate. In 1977, the Government of Ontario appointed a Royal Commission on the Status of Pensions in Ontario, which is expected to report in the near future. The Government of Alberta undertook a review of its legislation affecting private pensions in 1978.

(4)The group was formally termed the "Comité d'étude sur le financement du Régime de rentes du Québec et sur les régimes supplémentaires de rentes". A summary of its report is contained in Appendix 3.

In 1976 the federal government established an inter-departmental task force - The Task Force on Retirement Income Policy - to study the major problems in the retirement income system and to set out options for policy that might be considered in response to them. This report is the result of that initiative.

It is important to note that there are some issues - closely related to the question of retirement income - which were beyond the scope of the Task Force inquiry. For example, the matter of pensions for the disabled and provision for surviving spouses of the non-elderly were outside its terms of reference. By the same token, the report has also not dealt with those needs of the elderly that are unrelated to the adequacy of their retirement income. Nor does the report examine the levels of social assistance available to the elderly as compared to the non-elderly. Important as they are, all these and other related issues were excluded from detailed consideration in order to concentrate attention on the retirement income system, and especially the pension system, which is a large, complex and important subject in its own right.

Finally, it is worth drawing attention to two of the working assumptions that underlie this report. The first has to do with the changing public perception of retirement pensions. Originally, the provision of such pensions by an employer was regarded as a reward for employees who had rendered long and faithful service. Gradually, however, the view has evolved that pension payments are a form of deferred compensation that is payable by an employer to his former employees for services rendered. As such, retirement pensions may be seen as earned rights. That view forms one of the assumptions of this study.

The second working hypothesis of this report is that life expectancy will continue to increase only gradually. At the same time, it is recognized that a decisive breakthrough in medical science could bring about a rapid improvement in life expectancy, which would raise important new issues of public policy. If evidence emerged that life expectancy were beginning to lengthen quickly, it would be necessary to re-examine many of the fundamental elements of the present retirement income system, including the normal age of retirement and the age of entitlement to pension benefits.

CHAPTER I

INTRODUCTION

This report is intended to serve a threefold purpose:

- to describe and evaluate the present retirement income system in Canada;
- to develop alternative policies for resolving or minimizing any shortcomings in the system that emerge from this evaluation; and
- to outline the advantages and disadvantages of these alternatives that should be weighed in the process of deciding on any reform of the present system.

A. Why Governments are Involved in the Retirement Income System

As an essential preliminary to implementing these objects, it is important to consider the reasons why governments have become involved in the retirement income system. Why is the provision of retirement income not left exclusively, or largely, to private initiative? What objectives appear to have motivated government involvement? And what lies behind these objectives?

Up to the present, public policies relating to retirement income appear to have been aimed at achieving two broad objectives.

The first objective is to alleviate poverty among the elderly. This objective is reflected in the Guaranteed Income Supplement (GIS), the Spouse's Allowance (SPA), supplementary provincial programs to provide income to the elderly, income-tested housing assistance, and other needs- and income-related programs.

The second objective is to help and/or require people to allocate appropriately their lifetime income - and hence consumption - between their pre-retirement and post-retirement years. Governments seek to achieve this objective by:

- ensuring that those age 65 and over receive pensions that are not conditional on their current economic circumstances - that is, that the pensions are not based on a means test or an income test. The C/QPP and the OAS reflect this objective. These programs require that consumption be forgone during the pre-retirement period, through the payment of compulsory contributions or taxes, in exchange for consumption after retirement through benefits which are paid as a matter of right;

- encouraging those who wish more consumption in their retirement years than is provided through public pensions to participate in pension arrangements at their workplace or to save privately. Tax assistance is provided by governments to help achieve this objective; and
- helping to ensure, through the establishment of vesting, solvency, disclosure and investment standards, that employer-sponsored pension arrangements are operated in a way that is consistent with the promises offered. Apart from providing safeguards with regard to funds available to meet pension liabilities, these standards are aimed at reducing the scope for an employer to wilfully dismiss an employee in an effort to avoid pension obligations.

Before elaborating on these objectives, a general observation about the reasons for the growing involvement of government in the retirement income system is in order. It has already been pointed out that in earlier times, when Canadian society was essentially rural in nature, people normally worked for as long as health and strength would permit. When they could no longer work, they turned initially to their children for support if they had been unable to save. Even those who had saved were likely to look to their offspring for assistance, since their saving was frequently in the form of a farm, or other small business, and the tradition of passing on such assets to the younger generation was strong. With the transition from a rural to an urban society, however, the family, by force of circumstances, became a far less secure source of support for the elderly. Increasingly, therefore, governments found themselves compelled to assume the role that the family had played in an earlier and very different age. As already indicated, this role has come to be aimed at the achievement of two broad objectives.

The first objective, that of reducing poverty among the elderly, is readily understandable. Government action to alleviate poverty extends to all those with low incomes, or no income, including the elderly. It reflects society's sense of obligation to its less fortunate members.

The second objective is rather different. It reflects the ways in which government has become involved in the decision-making of individuals and groups to help them allocate their lifetime income between working years and retirement years. The reasons that underlie it and, in particular, its compulsory aspects, merit attention.

The first reason is that if an adequate pension system is in place and working effectively, programs to prevent or alleviate poverty among the elderly can then be restricted in the main to those persons who had low incomes when they were of working age. Confining the application of programs like the GIS in this way not only reduces the burden on the taxpayer, but also helps to prevent the development of inequities - as can occur when those who save during their working years are no better off in retirement than those who do not save.

A further reason for this second objective is that unless people are required to make adequate provision for retirement during their working years, many will fail to do so. When people are in their 20s, 30s, and 40s, immediate financial requirements to feed, clothe and house a young family press heavily on current earnings, frequently leaving little money for retirement saving. By the time the financial pressures of rearing a family have begun to ease, an individual may have relatively few working years left to provide for his retirement needs.

But even those in their younger years who have the resources and inclination to make some provision for their retirement are confronted by a serious problem. A person who is, say, 20 or more years from retirement, may find it very difficult to estimate how much income he will need in retirement and, therefore, how much he ought to save, in the absence of any foreknowledge of his future earnings pattern, marital status and life span and of future rates of investment return and of inflation.

A third reason underlying the second objective is that individuals and private institutions appear to be ill-placed to offer insurance against certain economy-wide developments. Thus, a person who saves and insures himself adequately can find that unanticipated inflation, depression, or a poor investment climate seriously erodes the value of his private savings and insurance.

When governments require individuals to participate in public pension programs, some of the difficulties mentioned above are eliminated and others are reduced. These programs pool risks inherent in unforeseen future events, lessening the risk faced by any single individual. A retirement income system that includes a significant public institutional element also provides a measure of discipline that many people welcome. In addition, it reduces the administrative burden on the individual.

The existence of a government-operated retirement income arrangement is not, of course, a guarantee that the pensions will not be altered in the event of changed economic and social circumstances. There does appear to be a perception, however, that a government-operated plan has a greater capability than a private arrangement for preserving the position of the elderly relative to the working population.

For all the above reasons, it appears that many people support collective arrangements such as the OAS, the C/QPP, and employer-sponsored pension plans. They appear to view such programs, which guarantee an income throughout retirement, as arrangements analogous to those they would individually impose on themselves if they had sufficient foreknowledge and self-discipline. In this sense, contributing to a collective retirement income plan is probably seen by many people less as an unwanted tax than as an arrangement that helps them to allocate appropriately their lifetime consumption between work years and retirement years and, thus, relieves them of the burden of preparing on their own for their retirement years.

Thus, a strong rationale exists for government involvement in arrangements aimed at the deferral of consumption. However, that rationale does not make clear how much deferral should be required by government and how much should be encouraged. Indeed, the questions of how consumption should be allocated between working years and retirement years under mandatory pension arrangements, and what type of framework should govern voluntary retirement arrangements, raise fundamental issues - issues that are the subject of much of this report.

The scope and degree of current government involvement not only reflect the objectives discussed above but also, of course, some obvious constraints. Firstly, government involvement is restricted by the natural concern that taxes (and other compulsory levies) be kept as low as practical. Similarly, government involvement is also limited by economic and administrative factors, in the sense that certain forms of involvement may be judged to be, from an economic and/or administrative perspective, more desirable than others. Finally, the division of constitutional powers in Canada limits the freedom of action of both federal and provincial governments in relation to pension matters.

B. Some Underlying Themes

Two further points arise frequently in this report that are sufficiently important to merit special note at the outset.

The first stems from the fact that the different types of pension plans and other arrangements that constitute the retirement income system have widely varying characteristics. These diverse arrangements are frequently classified according to the way they are financed. If they involve individuals or groups setting aside money in their work years, and allowing the money to accumulate in order to enhance their income during retirement, they may be described as 'saving-type' arrangements. On the other hand, if they are based on the payment of taxes or 'contributions' by individuals or groups during their work years, which are immediately channelled to the current elderly, they are referred to as 'transfer-type' arrangements. Some retirement income arrangements can be neatly classified as being of one or the other of the two types. However, many other retirement income arrangements are hybrids - having some saving and some transfer characteristics. This is true, for instance, of the Canada and Quebec Pension Plans. Some saving is associated with these plans as reflected in the large fund each has accumulated. But since the contribution rate of each has been, and remains, inadequate to pay for the full cost of the benefits that the two plans promise to their contributors, both contain an important transfer element. Many employer-sponsored pension plans also have both savings and transfer characteristics.

Some people favour saving-type arrangements over transfer-type arrangements. They argue that to minimize the possibility that an age cohort - those of a particular age group - will somehow be deprived of the retirement income it had planned for, and provided for, its pension contributions should be put into a separate, 'earmarked' fund and handled

by trustees - not by employers or governments. In this way, the probability of future generations interfering with the right of the cohort to receive its full public or private pension benefits would be minimized. They point out that if the money set aside for retirement purposes is large enough, and earns the expected rate of return, the probability of that group actually receiving the pension incomes it has counted on will be quite strong.

But - and this is the second point to be noted - the future is, in fact, uncertain. People cannot be sure if they are saving enough; nor can they be sure what rate of return they will earn on their investment. If future rates of per capita economic growth, inflation, and investment return were all perfectly predictable, both for individuals and for the economy as a whole, individuals would have the capability of planning and providing for retirement on their own. They could decide on the desired division between consumption today and consumption tomorrow; the amount of saving required to effect the desired division could then be easily computed. Those, for example, who wished to maintain a standard of living in retirement comparable to that of their later working years could decide how much to consume and how much to save from their incomes during the pre-retirement period in an effort to achieve that goal. If they considered they lacked the discipline to do this as individuals, they could act collectively through whatever institution was most appropriate.

With an uncertain future, however, saving cannot provide certainty with respect to retirement incomes. Economic growth and the rate of investment return may be far different than expected. Inflation or political upheaval may wipe out savings, including the assets of pension funds.

Uncertainty about the future also affects transfer arrangements - though in ways that are different. Future cohorts can be expected to encounter economic, social and political circumstances unlike those of today, and those future conditions cannot be known with certainty. Thus, it is not possible to know what treatment future generations of workers will accord those now in the labour force when they retire. The principal transfer programs for the aged - the OAS, the GIS and C/QPP (which as noted have important transfer elements) - are in the hands of future voters and the governments they elect. One issue here is whether the behaviour of future governments is likely to be influenced significantly by the existence of a separate fund, as in the case of the CPP or the QPP.

Two themes emerge from this discussion. The first is that there is substantial uncertainty about retirement income levels, whether saving arrangements or transfer arrangements constitute the main basis of the retirement income system. The other is that there is a need for a set of rules or guidelines - a social consensus - about the kind of arrangements considered to be fair between generations. Without such a consensus, it is difficult for those now in the work force to decide upon the kind of treatment they 'owe' to today's elderly, and the kind they might expect from future generations of workers when they themselves have retired.

CHAPTER II

A DEMOGRAPHIC AND ECONOMIC PROFILE OF THE ELDERLY

This chapter provides a brief description of the demographic and economic situation of the elderly. The focus is on the family relationships of the elderly, as they are now, and are expected to evolve, and on their economic positions as produced by the retirement income system that has been in place over the past few decades. Defining the group that will be referred to as the elderly involves subjective judgments. In this report, the 'elderly' refers to those age 65 and over. Many individuals, of course, withdraw from the labour force prior to that age for health, labour market, or other reasons, and others work well beyond that age. The choice of age 65 was influenced by the fact that it is the age of entitlement to benefits in many public and private pension programs. The choice, however, involves no prejudgment concerning what the age of entitlement should be.

A. Demographic Factors

One aspect of the population structure that is highly germane to pension policy is the dependency ratio - that is, the ratio of those beyond normal working age and of those who have not yet reached working age to the total working-age population. Statistics Canada has published a number of population projections based on a range of fertility and migration assumptions. These projections permit estimates to be made of future dependency ratios. Table II-1 shows the historical pattern of dependency ratios in Canada and the changes that may be expected on the basis of low fertility and low immigration assumptions. This set of assumptions is used throughout this report to minimize the possibility of underestimating the future cost of the pension system.

Table II-1

Aged- and Total-Dependency Ratios, 1931-2031

Year	Aged-Dependency Ratio Based on Work-Age Population		Total-Dependency Ratio Based on Work-Age Population	
	1	2	3	4
	18-64	Alternative 18-59	18-64	Alternative 18-59
1931	10	16	76	85
41	11	18	68	78
51	13	21	74	86
61	14	21	87	99
1971	14	22	78	90
76	14	22	67	79
81	15	23	60	70
86	16	24	57	68
1991	17	25	58	68
96	18	25	57	68
2001	18	25	55	65
06	17	27	52	64
2011	19	30	52	67
16	21	35	55	72
21	25	40	59	79
26	29	45	64	84
31	32	45	67	84

Note: The aged-dependency ratio is calculated by dividing the number of people in the post work-age population by the number of people who are of work age and multiplying by 100. The total-dependency ratio is calculated by dividing the number of people in the pre- and post-work-age populations by the number of people who are of work age and multiplying by 100. Columns 1 and 3 define working years as those between the ages of 18 and 64. Columns 2 and 4 show the effect of defining working years as those between the ages of 18 and 59. See also Appendix 9.

Source: 1931-1971 Census;

1976-2031 Statistics Canada population projection based on fertility rate of 1.8 births per woman of childbearing age and net annual immigration of 100,000.

Column 1 of Table II-1 indicates that under this low fertility/low immigration set of assumptions, the aged-dependency ratio, which is now quite low in comparison with that in many other industrial countries(1), will rise from 14 to 32% over the 1976-2031 period. Most of the change occurs during the second half of the period. To keep this shift in proper perspective, however, it is important to note that the increase in the aged-dependency ratio is for a considerable period more than offset by a decrease in the youth-dependency ratio. Accordingly, the total-dependency ratio, shown in Column 3, would fall from 67% in 1976 to 52% in the first decade of the next century before rising again to 67% by 2031. Columns 2 and 4 portray the same two ratios when the work-age population is taken as encompassing those age 18 to 59. They illustrate dramatically the substantial effect that would be associated with generally shortened work lives.

Table II-2, drawn from the 1976 Census, shows the composition of the elderly as of 1976 by age, sex and marital status.

Table II-2

Elderly Population by Age, Sex, and Marital Status, 1976

Marital Status	Age 65 - 74		Age 75 and Over		Total 65 and Over	
	Male	Female	Male	Female	Male	Female
	(% distribution)					
Married	80	50	62	22	74	39
Single	20	49	38	78	26	61
(Never married)	(9)	(10)	(10)	(11)	(10)	(10)
(Widowed)	(9)	(38)	(27)	(67)	(15)	(50)
Total	100	100	100	100	100	100
Numbers (000s)	580	675	295	452	875	1127

Note: Numbers may not add due to rounding.

Source: 1976 Census.

(1) Data compiled from the United Nations Demographic Yearbook 1974 place the ratio in Canada at 13%, using 15 to 64 as the work-age population. Austria, Sweden, Germany, the United Kingdom, France, Belgium and Norway are all shown with ratios ranging between 20 and 25%. Denmark, Ireland, Switzerland, Italy, the Netherlands and the United States range between 16 and 20%. Thus, in comparative terms, Canada's aged-dependency ratio is now low. Not until the second decade of the next century is it likely that Canadian ratios for aged-dependency will reach the levels projected for the Organization for Economic Co-Operation and Development (OECD) countries by the end of this century.

As the bottom line of the table indicates, more than 1.1 million (or 56%) of the 2 million people age 65 and over in 1976 were female. Of the 1.1 million females, 50% were widows. Among the 875,000 males, only 15% were widowers. This difference is due to the longer life expectancy of women and the fact that women usually marry men older than themselves. As a consequence, among those age 75 and over, women outnumbered men by more than 50% and over three-quarters of these women were single. Furthermore, the proportion of females in the population age 75 and over may be expected to continue to rise for some time because the life expectancy of females has been increasing faster than that of males.

B. Economic Factors

The principal sources of data on the economic position of the elderly include the questionnaires associated with the Census and with the Statistics Canada Survey of Consumer Finance (SCF). However, it should be noted that neither the SCF nor the Census attempt to measure transfers within families. In the absence of these data, the actual income of the elderly may be understated. The lack of information on intra-family transfers also makes it hazardous to compare the well-being of the elderly today with that of earlier periods, when such transfers undoubtedly played a larger role in determining the economic condition of the elderly than they now do. Whether the relative well-being of the elderly has improved over the last few decades is an important question, but one that unfortunately cannot be answered with any precision given this lack of data.

One question often raised is whether the elderly have significantly different consumption needs and wants than the rest of the population. In certain cases, it is evident that their requirements do differ. For instance, the circumstances of the elderly lead them to make wider use of health services than do other adults. But in many other cases, it is difficult to determine the extent to which the consumption of the elderly is affected by the amount of available income or by changes in family size as opposed to a change in their needs or tastes. For example, the lower a person's income, the less likely that person is to own a car. Also, among the middle aged and elderly, the older a person, the lower the likelihood of car ownership. Unfortunately, it is unclear to what extent the lower incidence of car ownership among the elderly is due to the increasing infirmity that comes with their old age and to what extent it is due to their lower incomes. No comprehensive study is available on changes in people's consumption patterns as they move from their middle to later years.

It should also be noted that the living standards of the elderly are affected by their housing situation. A greater portion of the elderly than of the non-elderly own their own homes, most of them outright, which represents a significant saving in the rent they might otherwise be required to pay. A significant proportion of the elderly also have joint housing arrangements (e.g. living with their married children). While comprehensive statistics are not available, the data that are available indicate that - excluding those who live in institutions - more than 36% of unmarried elderly men and 40% of unmarried elderly women share accommodation with others. Nevertheless, it is also the case that a significant proportion of the single elderly do not live in shared accommodation and are not able, therefore, to take advantage of the resulting economies. A very high proportion of those who live alone must be female since females account for a high proportion of the single elderly.

Table II-3

Average Income and Sources of
Income of Elderly Family Units, 1975

Income Source	Less than \$2500	\$2500-3999	\$4000-5999	\$6000-8999	More than \$9000	All Income Classes
Estimated no. of recipient units (000s)	227	458	209	146	113	1,153
% of total	20	40	18	13	10	100
Average income for units in class(1)	\$1,759	\$2,998	\$5,026	\$7,254	\$14,643	\$4,810
Sources of Income and Percentage Distribution by Income Class						
Total earnings(2) -		1	5	10	25	11
Investment income 5		8	18	24	37	21
Employer-sponsored pensions, an- nuities, etc.(3)	2	5	11	19	17	12
OAS/GIS	87	78	57	37	16	48
C/QPP	2	3	5	5	3	4
Other gov't transfers	4	4	5	5	2	4
Total income	100	100	100	100	100	100

- (1) Elderly family units are those individuals and couples where both spouses were age 66 or over at the time of the survey, Spring 1976, and thus age 65 or over for 1975, the year to which the income data apply.
- (2) The average income shown in the table for those with less than \$2,500 income is below the Old Age Security/Guaranteed Income Supplement (OAS/GIS) guarantee level for 1975. The most likely explanations for this situation are as follows: some of the elderly may have been immigrants who were not entitled to OAS; others were living with relatives and did not apply for GIS; and still others did not fully report their GIS benefits. Also, investment income, and income from employer-sponsored pensions and annuities are both subject to substantial under-reporting.
- (3) 'Total earnings' include wages, salaries, and net income from self-employment.
- (4) The total amount of retirement pension and annuity income estimated through the SCF for 1975 was \$1,899 million (virtually all of which consisted of employer-sponsored pension benefits). Of this total, only \$680 million was actually paid to the elderly covered by this table. Among recipients not covered here are couples where one member was under 65, recipients of a survivor's pension or of retirement income who were under 65, and institutionalized persons - including those in homes for the aged.

Note: Figures may not add due to rounding. This table excludes income or other benefits resulting from intra-family transfers, subsidized services and supplementary provincial transfer programs. It also excludes the imputed rent derived from the ownership of a home.

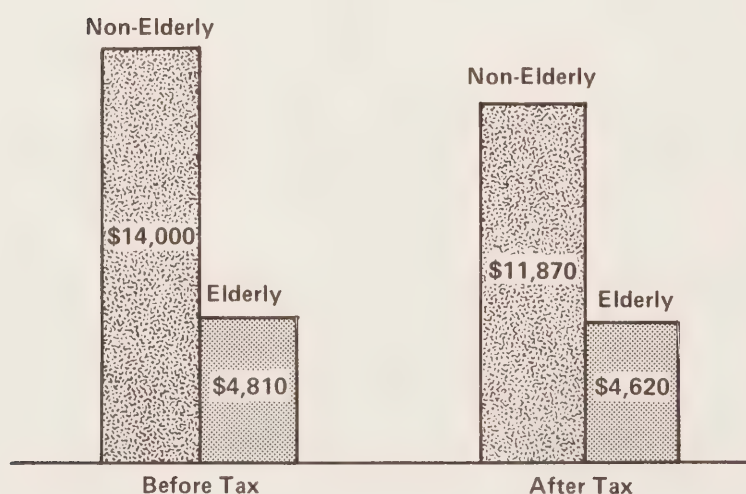
Source: Statistics Canada, Census Family Public Use Sample Tape, SCF 1976 (based on 1975 data).

The figures in Table II-3 underline the important role played by public programs as a source of income for older Canadians. Of the elderly, 60% reported annual incomes in 1975 of less than \$4,000, 85% of which came from public plans such as OAS, GIS and Canada/Quebec Pension Plans (C/QPP). Well over half the total reported income of all of the elderly also came from those sources. The relatively small proportion of income from the C/QPP, 4%, was primarily because these plans had been in operation for a limited period only, so that a significant proportion of the elderly did not qualify for benefits from them.(2)

One of the crucial facts to emerge from this statistical picture for 1975 is that the average reported money income of the elderly before taxes was some \$4,810. Their after-tax income was \$4,620. Figure II-1 compares the income position of the elderly with that of the non-elderly. Before tax, the average income of the elderly in 1975 was only one-third that of the non-elderly; after tax, the corresponding figure was 40%.

FIGURE II-1

Average Money Income of the Elderly and the Non-Elderly, 1975



Note: The elderly are as defined in Table II-3. The non-elderly consist of individuals who were under age 66 and families where both spouses were under age 66 in the Spring of 1976, when the survey was conducted. Source: Same as Table II-3.

(2) Many of the current elderly receive no C/QPP pensions. In addition, all C/QPP pensions-in-pay in 1975 were 'prorated' to some extent. After the turn of the century, virtually all of the then eligible elderly will be in receipt of C/QPP pensions which have not been subject to prorating.

It is important to note that, among the unattached elderly, the average income of females was about 15% below the average income of males. Single elderly women have lower incomes than single elderly men because they receive relatively less income from investments, employer-sponsored pensions, C/QPP and work earnings.

Table II-3 also shows that employer-sponsored pension plans are a relatively small source of income for the elderly. On average, 12% of the reported income of the elderly came from such pensions and annuities. Furthermore, as subsequent sections will indicate, more than one-half of such pension benefits (which throughout this report are generally referred to as pensions-in-pay) were paid by public sector employers.

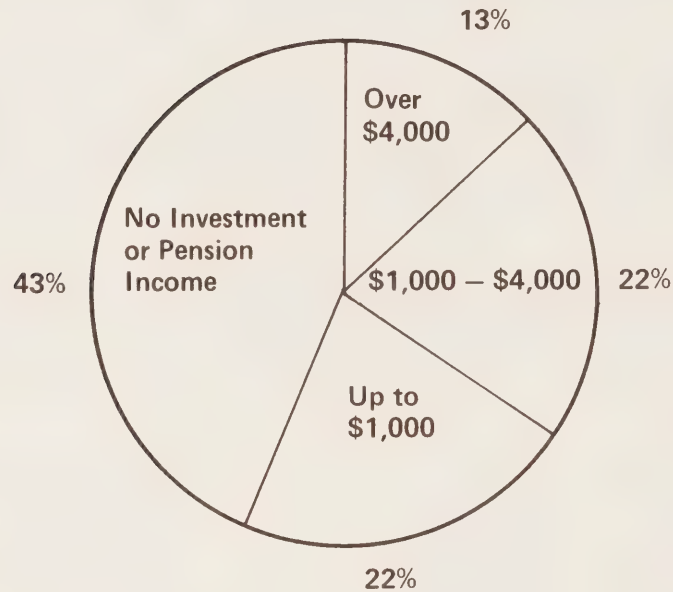
Although investments were a significant source of income for the elderly, 21% in aggregate, only about one-half of the family units reported any income from this source. It should also be noted that those in the top two income classes accounted for three-quarters of the total investment income received by the elderly.(3)

Figure II-2 below indicates that in 1975 some 65% of the elderly reported that their combined income from employer-sponsored pension plans and from investments amounted to less than \$1,000. This underlines the fact that income from these two sources was highly concentrated.

(3)The role of the life insurance industry in the provision of retirement income is diffused through Table II-3, appearing under the heading either of 'investment income' or 'employer-sponsored pensions, annuities, etc'. One or the other of these two categories would cover income from Registered Pension Plans (RPPs), Registered Retirement Pension Plans (RRSPs) and other annuities for which life insurance companies act as funding agencies, as well as income generated from the proceeds of life policies whose beneficiaries directly or indirectly are surviving spouses and endowment policies whose maturity has been designed to coincide with retirement.

FIGURE II-2

Investment and Private Pension Income of the Elderly, 1975



Source: Same as Table II-3.

The figures in Table II-3 exclude dissaving, a potentially significant source of income of the elderly, which may be drawn on to finance current consumption. Table II-4 provides some indication of the relative wealth and income of the elderly compared to that of other age groups for 1977.

Table II-4

Average Wealth of Families
and Unattached Individuals, (1) Canada, 1977

Age Group (by Age of Family Head)	Average Wealth May 1977	Average Home Equity(2) May 1977 (\$)	Average Income 1976(3)
Under 25 years	5,466	1,980	9,444
25 - 34 years	23,664	11,769	16,643
35 - 44 years	57,257	25,365	20,395
45 - 54 years	74,405	31,210	21,056
55 - 64 years	70,300	28,346	16,818
65 - 69 years	53,499	24,183	10,874
70 - 74 years	45,017	21,728	7,403
75 and over	42,591	19,172	
65 and over	47,074	21,655	8,604
All age groups	46,273	20,232	15,849

(1)Economic family definition.

(2)Home equity equal to estimated market value less outstanding mortgage(s).
Average over all family units (not owners only).

(3)Revised estimates, Income Distribution by Size in Canada, 1977, Statistics Canada, 13-207, p. 168.

Source: Statistics Canada unpublished data, Survey of Consumer Finances 1977, except for income - see (3) above.

The statistics show that the elderly as a group have somewhat above average wealth, although the 'old elderly' are not as well off as the 'young elderly'.(4) They indicate also that the equity in owner-occupied houses represents an important element in the wealth, or savings, of the elderly. The imputed income flowing to the elderly from homeownership can be quite important. Many elderly people own their own homes and relatively few have mortgages outstanding on which to make payments. The result is that the demands on their current income for rent or mortgage payments are reduced commensurately. Many Canadians have also saved during their working lives to acquire consumer durables such as furniture, appliances, automobiles and so forth (not included in Table II-4), which furnish flows of services to them in retirement.

(4)Here and in the next two paragraphs, various age groups, including the elderly, are defined simply in terms of the age of the family head. These data are based on a broader definition of the family unit than used in Table II-3 - closer to the extended family as opposed to the nuclear family.

Notwithstanding their somewhat above average wealth as a group, it appears that, on average, the elderly do not draw on their capital during retirement; on the contrary, they continue to accumulate savings at a moderate rate.(5) It may be that they are reluctant to draw on their savings because of uncertainty about life expectancy and consequently about their future needs and/or because of a desire to pass on wealth to their heirs. It is possible also that they continue to save following retirement either to increase their real wealth or just to maintain it in a period of inflation.

Hypothetically, if the elderly had converted all of their savings to an annuity in 1970, their gross median money incomes could have been increased in that year by around 60%. As it is, the equity the elderly had invested in home ownership represented a saving in rent otherwise payable equivalent to some 20-25% of median income.(6) However, the inclusion of this imputed rent would still have left the elderly with incomes about 40% below the similarly adjusted incomes of middle-aged (35 to 64) Canadian families. If account had been taken of all wealth, rather than just imputed rent, the adjusted median incomes of the elderly would still have been 25% lower than the similarly adjusted incomes of middle-aged families. In both comparisons, differences in family size have also been taken into account.(7) There are no readily available statistics to indicate whether the above relationship has changed in any significant way since 1970, though the 1977 data do not suggest any major changes.

Table II-5 presents data on a final important aspect of the income situation of the elderly - the after-tax distribution of their income compared with the corresponding distribution of the non-elderly.(8)

(5)The saving rate of spending units in the 65 to 74 and 75 and over ranges were estimated at 3.3% and 1.7% respectively, compared to an average household saving rate of 6.6% in 1969. These savings data are drawn from an unpublished 1977 Ph.d. thesis at Cambridge University by Michael C. Wolfson, The Causes of Inequality in the Distribution of Wealth, A Simulation Analysis, and are based on the Statistics Canada 1969 Family Expenditure Survey.

(6)More than 64% of elderly family units owned their own homes in 1976, and some 90% of those homes were owned outright.

(7)This paragraph is based on "Wealth and the Distribution of Income, Canada 1969-70", by M.C. Wolfson in Review of Income and Wealth, June 1979.

(8)The elderly and non-elderly populations are defined as in Figure II-1.

Table II-5

After-Tax Share of Income by Income Groups of Elderly
and Non-Elderly Family Units, 1975

Income Group	<u>Elderly Family Units</u>		<u>Non-Elderly Family</u>
	Income		Units
	Share		Income
			Share
	(%)		
Bottom 20%	7		5
Second 20%	11		13
Third 20%	14		19
Fourth 20%	22		25
80-90%	16		16
90-95%	11		9
95-100%	20		13
All	100		100

Note: Numbers may not add due to rounding.

Source: Same as Table II-3.

Table II-5 indicates that the bottom 20% of the elderly population has 7% of the income of the elderly, whereas the bottom 20% of the non-elderly population has only 5% of the income of the non-elderly. For the lowest income groups, therefore, there is greater equality of incomes among the elderly than the non-elderly. The likely explanation for this difference is that, at the low end of the income spectrum, the public transfer programs provide a higher income floor for the elderly than do the corresponding programs for the non-elderly. A different situation prevails at the upper end of the income spectrum in that there is rather more inequality among the elderly than the non-elderly. Here, factors such as the cumulative effects of a more unequal distribution of savings, and hence investment income, and the limited coverage of low-income individuals by employer-sponsored pension plans, probably account for the relatively higher levels of inequality among the elderly.

In summary, the following main points emerge from the data presented above:

1. The proportion of the elderly in the total population is expected to increase substantially, with most of the increase occurring after the year 2000.
2. Some 56% of those 65 and over in 1976 were women and of that total half were widows.
3. Although at least 36% of single elderly men and 40% of single elderly women live with other people, a substantial proportion of the single elderly live alone and do not enjoy the economies of shared accommodation; and among those who live alone, a high proportion are female.

4. The average money income of the elderly is between 35 and 40% of the corresponding income of non-elderly family units (depending upon whether the comparison is made on a before- or after-tax basis).
5. The average income of single elderly females is 15% less than that of single elderly males.
6. More than half the reported income of the elderly comes from public pension programs. In 1975, 60% of the elderly reported incomes of less than \$4,000, and approximately 85% of that income came from public plans.
7. Money income of families, unadjusted for family size, homeownership and wealth, is not the only - nor necessarily the best - indicator of the relative economic position of the elderly.
8. Adjusting the money incomes of the elderly for wealth generally, or just for homeownership, and for family size as well, improves both their average and relative economic positions. But it remains about 25-40% below the similarly calculated economic position of middle-aged family units.
9. Incomes of the elderly are distributed more equally in the lower-income ranges, and less equally in the upper-income ranges, as compared to the rest of the population.

CHAPTER III

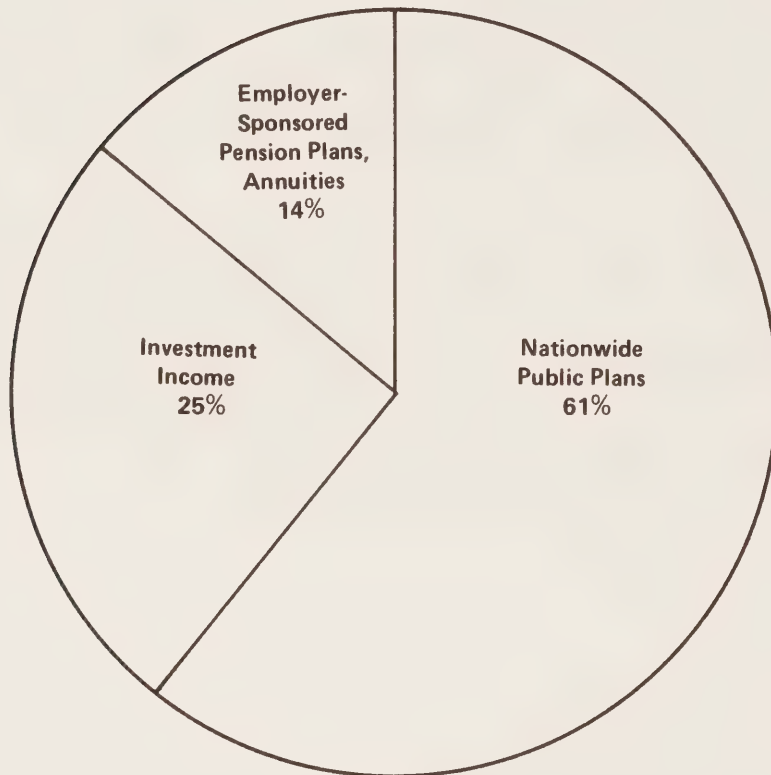
RETIREMENT INCOME ARRANGEMENTS IN CANADA A DESCRIPTION OF THE SYSTEM AS IT NOW EXISTS

This chapter describes the retirement income system under the following headings: A. The Public System; B. Employer-Sponsored Pensions; C. Registered Retirement Savings Plans (RRSPs); D. Sources of Retirement Savings and their Uses in the Economy; and E. Retirement Age. Section F deals briefly with the constitutional setting.

Figure III-1, which is based on data in Table II-3, gives some perspective on the relative magnitude of the three principal sources of retirement income - public plans, employer-sponsored pension plans, and the return on private investment. It indicates the share of each in 1975 - the latest year for which statistics are available. The nationwide public plans provide by far the greatest proportion of retirement income - 61%. They include Old Age Security (OAS), the Guaranteed Income Supplement (GIS), the Spouse's Allowance (SPA), and the Canada and Quebec Pension Plans (C/QPP).

FIGURE III-1

Share of Retirement Income of the Elderly
in 1975 from Nationwide Public Plans,
Employer-Sponsored Pension Plans, and Investments



Source: Statistics Canada, Census Family Public Use Sample Tape, Survey of Consumer Finances, 1976 (based on 1975 data).

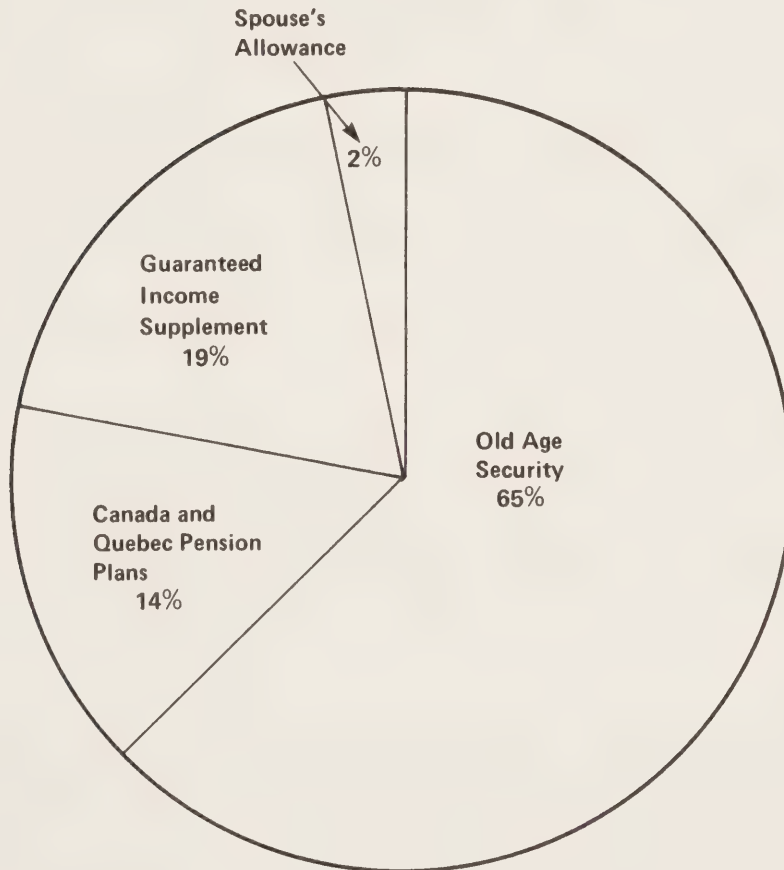
A. The Public System

The income of the elderly in Canada today, both in amount and distribution, is influenced importantly by the public components of the retirement income system. Four elements of the public system are described here: the nationwide programs, under which cash payments are made to the elderly; the provincial cash programs; the special provisions made for the elderly within the income tax system; and, finally, some of the many other programs which provide benefits to the elderly.

1. The Nationwide Cash Programs. Canada has three main public pension programs: the OAS, which provides a flat rate payment to virtually all of the elderly; the C/QPP, which provides pensions on an earnings-related basis; and the GIS, an income-tested program which is designed to assist the poor among the elderly. The SPA program may usefully be considered as an extension of the GIS.

Figure III-2 shows the relative role played in 1977 by the above four nationwide cash programs.

FIGURE III-2
Pension Payments from Nationwide Public Plans,
1977



Source: The Public Accounts

a) The OAS. The OAS is a federal program which pays a flat rate 'demo-grant' to virtually all those aged 65 and over in Canada. The residency requirements exclude from the program only some 2% of the elderly. Given its near universal nature, it is not surprising that the OAS, as indicated by the chart, is the largest single source of retirement income provided by the public plans.

The OAS program began in 1952. It replaced a means-tested program for the elderly introduced a quarter of a century earlier, the financing of which had been shared between the federal and provincial governments. In 1952, the monthly OAS payment was set at \$40 and was restricted to those aged 70 and over. By 1978, the average monthly payment was \$159 and was available to those aged 65 and over - the age of eligibility having been lowered in a series of steps during the period from 1966 to 1970. These benefits are taxable, however, so that the net after-tax benefits of an individual vary according to his or her taxable income. The rise in the OAS payments was the product of various ad hoc increases through the years and of the full indexing of benefits in line with the increase in the Consumer Price Index (CPI) since 1972.

OAS benefits are financed out of the Consolidated Revenue Fund. In 1977, the total cost amounted to \$3.6 billion. After taking account of OAS payments recovered through taxes, the net cost of OAS benefits in that year is estimated at about \$3.5 billion.

b) The C/QPP. The Canada and Quebec Pension Plans began in 1966. As Figure III-2 indicates, benefits paid out under these plans in 1977 amounted to only 14% of the total retirement income from public programs. This was due primarily to the relative immaturity of the C/QPP and consequently the limited proportion of the elderly covered by them. Over the next 30 years, however, they will play an increasingly important part in the country's public pension system as a growing proportion of those 65 and over become eligible for benefits.

Although separately enacted, the Canada Pension Plan and the Quebec Pension Plan provide almost identical retirement benefits. Arrangements between the Quebec and federal governments also provide for the automatic transfer of benefit credits between the two plans when an individual moves between the province of Quebec and another part of Canada, with costs being shared proportionately between the two plans. Taken together, therefore, the Canada and Quebec Pension Plans can be considered as forming a single, nationwide pension system.

Both plans are contributory and earnings-related. Mandatory contributions are collected on a range of earnings from employment of virtually all individuals in Canada. The amount of the contribution on behalf of an individual is related to earnings between a minimum level, which is termed the Year's Basic Exemption (YBE)(1), and a maximum, the Year's Maximum Pensionable Earnings (YMPE). It should be noted that both these terms will be referred to frequently throughout the report. In 1979, the YBE amounted to \$1,100 and the YMPE amounted to \$11,700. At present, the contribution rate on earnings between the basic exemption and the maximum is 3.6%, with 1.8% being paid by employers and an equal amount by employees. An employee earning the \$11,700 maximum or more in 1979 would pay contributions on earnings between \$1,100 (the YBE) and \$11,700 (the YMPE), or \$10,600. His contribution would equal 1.8% of \$10,600, or \$190.80, with an equal amount being paid by his employer.

(1) Defined as an amount equivalent to one-tenth of the YMPE where the YMPE is a multiple of \$1,000. Otherwise, it is the next multiple of \$100 below that amount.

For a self-employed person, the contribution rate is double that of an employee. Earnings from employment in excess of the YMPE are excluded from consideration in calculating required contributions.

When the C/QPP were launched in 1966, the level of maximum pensionable earnings covered was approximately equal to the level of average wages and salaries (AWS) of Canadian workers.(2) The level of pensionable earnings fell substantially below the average wage and salary level, however, because for a number of years the pensionable earnings ceiling was effectively limited by statute to a maximum increase of 2% per year. But during this same period the level of AWS rose at a considerably faster rate. By 1973, the YMPE equalled \$5,600, which was equivalent to only two-thirds of average wages and salaries in that year. The result of this growing disparity was to undermine the effectiveness of these two plans to serve as instruments for replacing pre-retirement earnings. Under amendments made to the C/QPP in 1973, the YMPE was set at \$6,600 for 1974 and \$7,400 for 1975. This brought maximum pensionable earnings up to around 70% of AWS in each of those years. The amendment also provided that the YMPE should increase by 12.5% each year thereafter until it regained equality with average wages and salaries, after which it would rise at the same rate as AWS. In 1978, average wages and salaries amounted to around \$13,800, which was significantly above the maximum pensionable earnings for the year of \$10,400.

Retirement benefits payable under the C/QPP are related to average earnings during working years up to the YMPE. Up to that level, the higher one's average earnings in the pre-retirement period, the higher the C/QPP pension. The benefits are also adjusted annually in accordance with the CPI. Benefits for a surviving spouse aged 65 or over are equal to 60% of those which were paid to the deceased contributor. A slightly higher pension is paid to a surviving spouse aged 45 to 64 or to any surviving spouse who is disabled or supporting dependent children of the deceased contributor. For a surviving spouse who meets neither of these latter two conditions, and who is between 35 and 45 years of age at the time of the contributor's death, a partial pension is paid. In 1978, the maximum C/QPP pension benefit was \$194 per month and in 1979 it is approximately \$218 monthly.

Under the basic C/QPP formula, the amount of a retirement pension payable to a contributor is based on the history of his pensionable earnings over his working life. The earnings for each year are adjusted to bear the same relationship to the average of the pensionable earnings ceilings (YMPEs) established for the three years ending with the year in which the pension commences as they bore to the ceiling in the year in which they were earned. Benefits are equal to 25% of this adjusted career-average earnings base.

(2) Average wages and salaries here refer to 'average earnings for the industrial composite' as measured by Statistics Canada and reported in catalogue 72-002, Employment, Earnings and Hours. The industrial composite does not cover all employment. Firstly, only firms employing 20 or more employees in any month of the year are included in the survey. Secondly, agriculture, fishing, trapping, non-commercial services, and public administration and defence are not covered. In 1976, the industrial composite was estimated by Statistics Canada to cover some 53% of total employment.

The effect of the formula may be illustrated by the case of an individual who retired in 1977. The average level of the YMPE for the three years 1975, 1976 and 1977 was \$8,333. If, for example, that individual's pensionable earnings in 1967 had been \$2,500, that would have amounted to one-half of the maximum pensionable earnings for that year of \$5,000. Therefore, his actual 1967 earnings of \$2,500 would be adjusted so that they bore the same relationship to \$8,333 as they had to the 1967 YMPE. The calculation is: $(\$8,333 \div 5,000) \times 2,500 = \$4,167$. This \$4,167 would be used in the calculation of the C/QPP entitlement instead of the \$2,500 of actual earnings.

The C/QPP earnings base is normally calculated on the 47-year period between the ages of 18 and 65. However, transitional procedures used to 'phase in' the C/QPP provided that those aged 55 and less in 1966 would be eligible for full pensions at age 65. These pensions are based on a contributory period varying from ten years in the case of the 55-year-old to 47 years in the case of the 18-year-old (subject to the 'drop-out' provision discussed below) who had just entered the labour force. Therefore, the closer an individual was to age 55, the fewer years he had to work to earn a full C/QPP pension. In this sense, virtually all of the then working population received a 'bonus' from the plans in varying degrees.

Another feature of the phase-in was that those aged 56 and over, who would contribute for less than ten years, were eligible to receive a prorated pension. For instance, those aged 64 in 1966 received one-tenth of a full pension if they retired at 65, despite having only a one-year contributory period. Accordingly, they too received a large bonus. By 1976, all those who were 55 or over in 1966 had reached pensionable age and the transitional prorating arrangements no longer applied to those who retired subsequently. (Initially the eligible age for the payment of retirement pensions was 65, subject to an earnings test up until age 70. This earnings test was removed from the CPP in 1975 and from the QPP in 1977.)

All annual earnings figures throughout the career are used in the calculation of the earnings base, subject to a drop-out provision which allows years of low earnings to a maximum of 15% of the 47-year total to be omitted from the calculation. Thus, the designers of the C/QPP regarded 40 years as the period appropriate for accrual of a full C/QPP pension. Those who reached 18 after 1965 and contribute for less than 40 years due to unemployment, non-participation in the labour force, etc. will receive a partial C/QPP retirement benefit.

Funds of around \$14.5 billion and \$5.3 billion had accumulated in the CPP and QPP respectively by the end of 1978. If the C/QPP contribution rate is left unchanged, it is currently estimated that both funds will ultimately be depleted just after the turn of the century. If the contribution rates are not raised between now and then, and if the plans were then put on a pay-as-you-go basis, under which annual contributions would be approximately equal in amount to annual benefit payments, it is estimated that the contribution rates would then have to be of the order of 6%, compared to the present 3.6%, and higher still in later years.(3)

(3)See Chapter XIII.

In 1977, an estimated \$790 million in C/QPP retirement and survivorship benefits was paid to those aged 65 and over. Total benefits (including orphans and disability pensions and death benefits) amounted to some \$1.3B. Had the C/QPP been mature in that year, i.e. had all the elderly qualified for unreduced pensions, C/QPP pensions-in-pay would have been in the order of three times that amount.

The C/QPP also provide for the payment of supplementary benefits - death benefits, orphans' benefits and disability benefits. With respect to the disability provisions, they allow early entitlement to benefits as a result of prolonged and severe physical or mental disability, provided the person has made contributions for a specified period. A flat rate payment, plus 75% of the contributor's imputed retirement pension, are available to individuals who are disabled. An additional flat rate monthly benefit is payable in respect of each dependent child. These supplementary benefits are beyond the terms of reference of this report and generally are not considered further in any detail.

c) The Guaranteed Income Supplement and the Spouse's Allowance. The third major nationwide public pension program is the GIS, which was the source of 19% of retirement income from these sources in 1977. It is provided for under the same federal statute - the Old Age Security Act - as the OAS itself. The GIS came into operation in 1967. It is an income-tested program designed to help the poor among the elderly. Those in receipt of OAS and no other income receive maximum GIS benefits. In 1978, maximum monthly benefits averaged \$111 for single pensioners and for pensioners whose spouses were ineligible for either OAS or for the SPA. For eligible married couples, the maximum average monthly GIS benefit was \$198 in 1978. Thus, those among the elderly with no outside income received maximum combined OAS and GIS benefits of around \$3,240 (the single rate) or around \$6,190 (the married rate) in 1978. These amounts represent the minimum benefits available to elderly individuals and couples under the national retirement income system.

Those with some income from other sources may still be eligible for reduced GIS entitlements. For pensioners receiving the single rate GIS, for example, income of \$1.00 from other sources reduces GIS entitlements by 50 cents. The income testing of GIS benefits is based on annual income, as defined in the Income Tax Act; benefit entitlements throughout any one year are based on income in the previous year. Table III-1, using hypothetical figures broadly representative of the 1978 rates, illustrates the principle involved.

Table III-1

Calculation of GIS Benefits for Single Pensioner
(Approximate Amounts Only), 1978

OAS	Other Income	GIS (\$1,300 - 1/2 Other Income) (\$)	Total Income From all Sources
1,900	0	1,300	3,200
1,900	100	1,250	3,250
1,900	1,000	800	3,700
1,900	2,000	300	4,200
1,900	2,600	0	4,500

In late 1978, the Old Age Security Act was amended so as to increase the single and married GIS entitlements by \$20 per month. As a result of this change and of the normal indexing adjustments, the January 1979 OAS/GIS guarantee levels were, on an annual basis, \$3,654 and \$6,753 for single rate and married rate GIS pensioners, respectively.

The Spouse's Allowance program, also included under the Old Age Security Act, provides benefits on an income-tested basis to individuals aged 60 to 64 who are married to OAS pensioners. The program was designed to alleviate situations where the older spouse - usually the husband - retired with few, if any, private resources. In this case, OAS and GIS would be available only to the older spouse. Consequently, until the younger spouse reached 65 and became eligible in her or his own right for OAS and GIS, the family income might be very low. The SPA filled this gap. In 1978, it guaranteed an annual income of \$6,190 to a couple with no other income but OAS and GIS where one spouse was between 60 and 64 and the other was 65 or over. The SPA is income-tested and rules broadly similar to those under the GIS are used to reduce the SPA benefit when there is income from sources other than OAS.

Like the OAS, both the GIS and SPA are paid out of the Consolidated Revenue Fund and are indexed quarterly to the CPI. Unlike the OAS, GIS and SPA benefits are not taxable. In 1978, some 55% of OAS recipients also received benefits from the GIS, with 19% receiving maximum benefits and 35% receiving partial benefits. The Spouse's Allowance was paid to more than 73,000 elderly family units in 1978. Payments under the two income-tested programs in 1977 amounted to around \$1.2 billion.

d) Program Relationships, 1967-1978. The benefit levels in relation to average wages and salaries under the three nationwide programs just described have changed substantially since 1967, the first year in which all three programs were in operation.

Table III-2 indicates the magnitude of the changes that have occurred in the 11 years during which the three programs have been in place, together with an indication of the relationship of the OAS to average wages and salaries in earlier years.

Table III-2

Monthly Benefit Levels, OAS, GIS, C/QPP, 1962-1978
Actual and as a Percentage of Average Wages and Salaries

	OAS(1)		GIS(1)		OAS&GIS	C/QPP	
			(single rate, max.)			(hypothetical maximum benefits)(2)	
	\$	% of AWS	\$	% of AWS	% of AWS	\$	% of AWS
1962	65.00	18.6					
1964	75.00	20.0					
1967	75.00	16.8	30.00	6.7	23.5	104.20	23.4
1968	76.50	16.1	30.60	6.4	22.5	104.85	22.0
1970	79.58	14.5	31.83	5.8	20.3	108.33	19.7
1972	82.88	12.8	67.12	10.4	23.2	112.50	17.4
1974	110.09	14.3	77.22	10.0	24.3	122.93	15.9
1976	135.43	13.7	94.99	9.6	23.3	154.86	15.7
1977	143.46	13.2	100.62	9.2	22.3	173.61	15.9
1978	156.66	13.6	109.88	9.6	23.2	194.44	16.9

(1) April benefit levels.

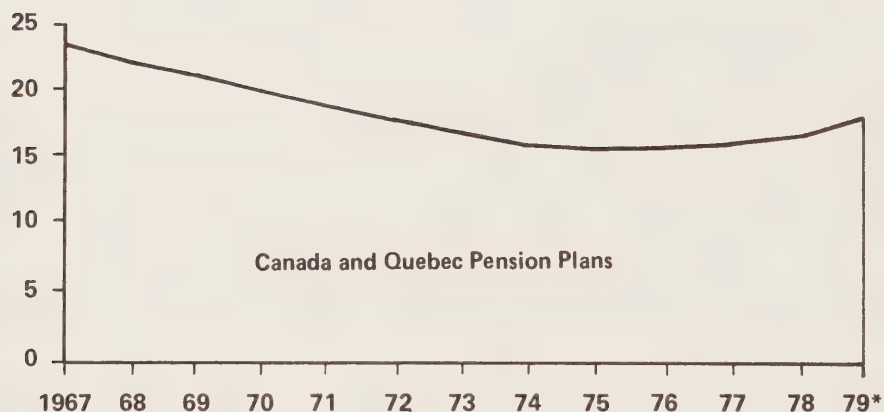
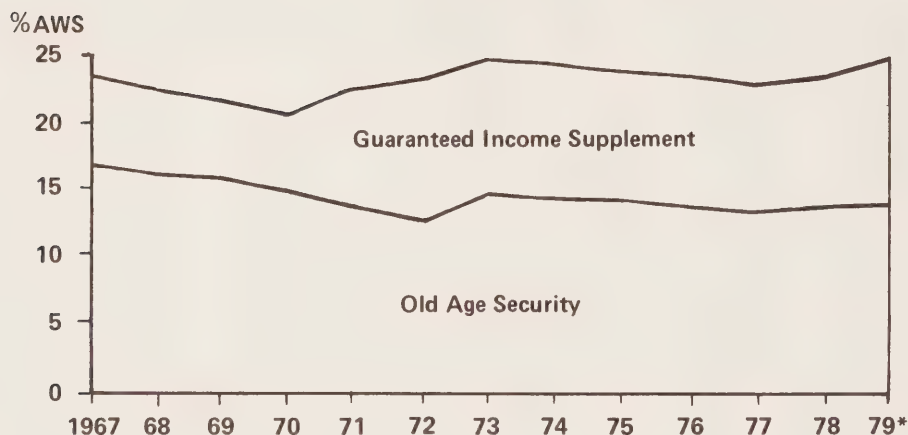
(2) The numbers for the years from 1967 to 1974 are hypothetical in that they assume unreduced pensions were paid in those years, instead of the reduced pensions that were actually paid due to the immaturity of the C/QPP, as outlined earlier.

In 1967, OAS benefits equalled nearly 17% of average wages and salaries. Since that year, OAS benefit levels relative to AWS have drifted downward. In 1978, they were equal to 13.6% of average wages and salaries - a decline of almost one-fifth. Benefit levels under the GIS, on the other hand, increased substantially. The maximum single rate rose from 6.7% of AWS to 9.6% - an increase of over two-fifths. The maximum C/QPP benefit actually paid, of course, rose over the period 1967-1978 as the program was phased in, increasing from 2.3% of AWS to 16.9%. However, the hypothetical maximum C/QPP benefit cited in Table III-2 fell from 23.4% of AWS in 1967 to 16.9% in 1978, a decline of more than one-quarter.

Figure III-3 illustrates the extent to which the universal OAS benefits have contracted in relation to the level of average wages and salaries. It is evident that this is in contrast to the income-tested GIS benefits, which have expanded in relation to AWS. As a result, the combined OAS/GIS benefit level in relation to average wages and salaries has been relatively constant. It can be seen that until 1974 the hypothetical maximum benefits payable under the C/QPP also declined considerably in relation to AWS. The trend has since been reversed following implementation in that year of the amendment that was aimed at gradually restoring the relationship between the two.

FIGURE III-3

Public Pension Benefits as Percentage of Average Wages
and Salaries (Maximums)



*Estimated

Note: See footnote (2) to Table III-2.

The factors that led to these large changes in the relative roles played by the three nationwide programs may be explained by considering separately events in the 1967-1970 period and the 1971-1973 period.

In the four-year period from 1967 to 1970, inflation adjustments to the benefit levels of all three programs were limited by statute to a maximum of 2% annually. In that period, prices increased by an average of 4% annually and average wages and salaries increased by an average of 7.2% annually. Therefore, the benefit levels of all three programs fell

In the second period, 1971-1973, the public retirement income system underwent three major changes. Firstly, the GIS guarantee levels were increased substantially. By April 1973, the maximum single GIS rate was, in real terms, close to double what it had been two years earlier.(4) Secondly, in 1973 OAS benefits were increased by about 20%. Thirdly, in October 1973 benefit payments under both OAS and GIS were fully indexed, on a quarterly basis, to the CPI.

Throughout both periods, C/QPP benefits and the maximum pensionable earnings covered by these plans were also constrained by the 2% per year indexing limit referred to above.(5) At the time of their inception, it was intended that the maximum pensionable earnings covered by these plans should remain generally in line with average wages and salaries paid in the economy. But by 1973, maximum pensionable earnings had fallen below the AWS level by one-third as a result of the 2% constraint. Following the 1973 amendment referred to earlier, the YMPE is now catching up to average wages and salaries. But, because wages and salaries have continued to increase at a significantly faster rate than was anticipated at the time this amendment was introduced, it is now expected that maximum pensionable earnings covered by the plan will not reach the level of AWS at least until the late 1980s. Since 1974, benefits under both programs have been indexed to the CPI.

e) International Comparisons. Maximum benefits under Canada's nationwide program were described immediately above in relation to average wages and salaries. Comparisons may be made on a similar basis with programs in effect in other countries. Although the results have not been adjusted for differences in the tax systems, or in the level of subsidized services of the countries used in the comparison, the following charts provide a fair reflection of the relative size of public pension benefits provided in a number of different industrialized countries. Note that the data on average wages and salaries for the United States have been adjusted to make them comparable with Canadian statistics.

Figure III-4 shows the benefits provided in the first year of retirement in eight countries to couples which had one earning member whose income throughout his or her working life was equal to average wages and salaries. The benefits are expressed as a proportion of gross earnings in the last year of work and, except where otherwise shown, the benefits were those in effect at the end of 1977. For persons in these circumstances, it can be seen that Canada's public pension system tends toward the low end of the scale.

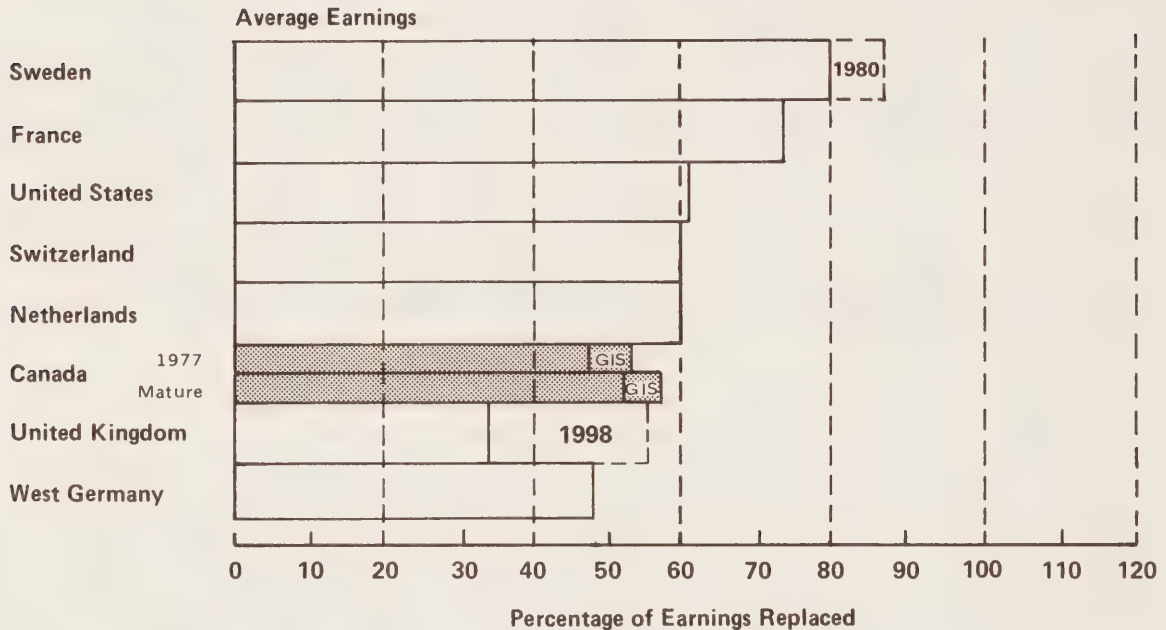
(4)During a part of this period, price indexing was withdrawn from OAS benefits.

(5)In 1973, the QPP limit was set at 3%.

FIGURE III-4

Public Pensions as a Percentage of Gross Earnings
Just Before Retirement

One-Earner Couples with Earnings Present Throughout Work Years



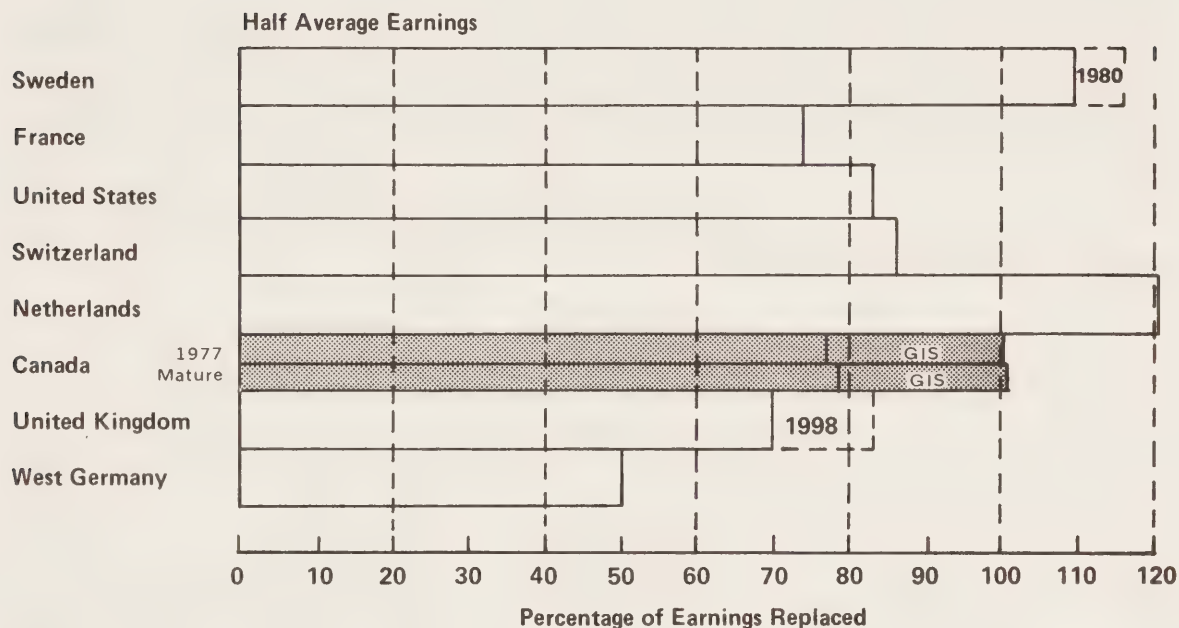
For those with low pre-retirement incomes, the conclusion is quite different. The elderly in Canada, whose incomes were low prior to retirement, are generally as well or better off in retirement, in relative terms, as those in similar circumstances in other countries. This is indicated in Figure III-5, which shows benefits in relation to earnings of those whose incomes during their working years were equal to one-half the level of average wages and salaries.

Underlying both Figures III-4 and III-5 is the assumption that the couple in Canada had made no private provision for retirement. This absence of private income qualifies the couples, in both examples, for the income-tested GIS benefits; there are no comparable programs applicable in the other countries at the earnings levels shown. The extensions to the bars for Sweden and for the United Kingdom, and the alternative bars for Canada, project the indicated changes in the relationship between pre-retirement earnings and post-retirement benefits that will result in future from revisions that had already been made in 1977 in the respective public plans.

FIGURE III-5

Public Pensions as a Percentage of Gross Earnings
Just Before Retirement

One-Earner Couples with Earnings Present Throughout Work Years



The situation of the one-earner couples shows Canada at its best, in relation to other western industrialized countries. If two-earner couples or single individuals are compared, Canada's position is relatively worse. For instance, for single individuals earning at the average wage, Canada drops from sixth to last in the list of the eight countries shown. For single individuals earning at half average wages, Canada drops from third to fourth. While all these comparisons are based on the most accurate information available, the results should be taken as indicative of rough orders of magnitude since age of entitlement, tax systems etc. differ among the countries shown.

2. Provincial Programs - 'Top-Ups'. Six provinces have income-tested programs of their own for the elderly. Most of these programs provide benefits that are 'stacked' on top of the GIS. As a result, the minimum incomes guaranteed in those provinces are higher than those guaranteed by the federal OAS/GIS system. Most provincial top-up programs are tied to the amount of GIS received. The Alberta supplement for single persons of \$540 annually, effective January 1979, was the highest of any province, but the Alberta rate for couples of \$1,133 was a little below the levels prevailing in Ontario and British Columbia. Under its Guaranteed Annual Income System (GAINS), Ontario provides benefits that, in 1979, will raise the minimum income of the elderly above GIS levels by around \$470 for single persons and \$1,200 for couples. British Columbia has a

program of similar dimensions. (In British Columbia, however, the age of eligibility for provincial benefits is 60. This in effect means that the Government of British Columbia operates its own income-tested program for those in the 60 to 64 age group.) Similar programs in Nova Scotia, Saskatchewan and Manitoba generally provide lower benefits.

As a result of the combined impact of GIS provisions and those applying to most of the supplementary provincial plans, private income is totally offset by an equivalent reduction in benefit payments. For every \$1.00 of additional income received, GIS payments would be reduced by 50 cents and provincial top-ups by the same amount. In Alberta, however, the combined effect of the GIS and provincial provisions is to reduce each additional \$1.00 of income by 75 cents, rather than by the full amount.(6)

Table III-3 shows the combined maximum benefits of the provincial and OAS/GIS programs.

Table III-3

Maximum Annual Incomes Available from
OAS/GIS and Provincial Top-Ups
(January 1979 Rates)

(Continued from Page 1)

Province	OAS Plus Maximum GIS		Maximum Provincial Supplements (Top-Ups)		OAS Plus Maximum GIS Plus Maximum Supplements		Single Rate as a Percentage of the Married Rate
	Single Rate	Married Rate	Single Rate	Married Rate	Single Rate	Married Rate	
(\$)							
Nfld., P.E.I., N.B., Que.	3,654	6,753			3,654	6,753	54.1
N.S.	3,654	6,753	150	300	3,804	7,053	53.9
Man.	3,654	6,753	94	202	3,748	6,955	53.9
Sask.	3,654	6,753	300	540	3,954	7,293	54.2
Ont.	3,654	6,753	467	1,223	4,121	7,976	51.7
Alta.	3,654	6,753	540	1,133	4,194	7,886	53.2
B.C.	3,654	6,753	467	1,196	4,121	7,949	51.8

Table III-3 indicates that the three wealthiest provinces (which have over one-half of the country's population) have the largest top-up programs; and that Ontario and British Columbia have configured their supplementary programs so that the combined benefits paid to couples under public programs are almost twice those of singles. Under the OAS/GIS programs and the programs of the other provinces, the combined single rate is close to 54% of the rate for couples.

(6) In Nova Scotia, stepped rates are used; i.e. those receiving full GIS benefits receive the full \$150 supplement, while those receiving between two-thirds and full GIS benefits receive a \$135 supplement, etc.

The top-up provinces have generally chosen the least expensive, or most 'cost effective', way of directing resources to the poor among the elderly. The use, for the most part, of a combined 100% federal-provincial benefit-offset on other income has kept program expenditures low. It is estimated that the total cost of supplementary provincial plans was under \$200 million in 1976-1977 - an amount less than 20% of GIS costs in that year.

3. The Income Tax System. A number of tax provisions have varying degrees of relevance to the retirement income system. Some of these are important during the pre-retirement period. For example, both employer and employee contributions to the C/QPP and to Registered Pension Plans (RPPs) are deductible up to specified limits in computing taxable income. Employer contributions to Deferred Profit Sharing Plans (DPSPs) and individual contributions to Registered Retirement Savings Plans (RRSPs) are similarly deductible up to specified limits.

The objective of these measures is to help people prepare for their retirement by encouraging them to save money during their working years. This requires them to forgo current consumption, so as to have income available with which to finance consumption in their retirement years. These provisions offer two important benefits. Firstly, although withdrawals are taxable when received, the individual benefits from what amounts to an interest-free loan, equal to the amount of the tax deferred, during the period his funds are sheltered from taxes. Secondly, it is likely that at the time the individual begins to withdraw the funds that have been accumulated, his or her marginal tax rate will be lower than it was at the time the contributions were originally made.

Other provisions of the Income Tax Act are of direct importance to the elderly. These provisions reduce their income taxes and in many cases eliminate their tax liability completely. In addition to the basic personal exemption, standard deduction, and the \$200 minimum basic federal income tax reduction, to which everyone is entitled, there is an additional exemption of \$1,660 (in 1979) for all those aged 65 or over. While the \$1,000 pension income deduction and the \$1,000 deduction from taxable income of interest, dividends, and taxable capital gains are available to all taxpayers with income from those sources, these deductions tend to be relatively more beneficial to the elderly.

The investment and pension income deductions, as well as the age exemption, are transferable between spouses. Under this provision, the unused portion of any or all of these deductions and of the age exemption can be transferred from one spouse to the other. As shown in Table III-4, an elderly couple able to take full advantage of these deductions and exemptions would be able to receive \$16,350 in income in 1979 before becoming liable for federal income tax. The maximum for a single elderly individual would be \$8,175. By contrast, the maximum tax-free income of non-elderly couples able to take full advantage of the deductions and exemptions available to them would come to \$13,030 and that for singles to \$6,515.

Table III-4

Federal Income Tax Exemptions and Deductions
Potentially Available to the Elderly, 1979

	Single	Couple
	($\$$)	
Basic exemption	2,650	5,300
Standard deduction	100	200
Federal general tax		
deduction (minimum \$200)(1)	1,765	3,530
Sub-total	4,515	9,030
Pension deduction	1,000	2,000
Interest, dividends and capital		
gains deduction	1,000	2,000
Sub-total	6,515	13,030
Age exemption	1,660	3,320
Total	8,175	16,350

(1) This is a deduction of a minimum of \$200 from taxes otherwise payable, in contrast to other exemptions and deductions shown in the table, which serve to reduce taxable income. This \$200 tax deduction is equivalent to a reduction of the first \$1,765 of taxable income for a single person and the first \$3,530 of taxable income for a couple.

Two additional points should be noted. Firstly, Table III-4 covers only the federal income tax system; under the provincial income tax systems treatment varies. In some cases, provincial tax is payable when federal tax is zero. Secondly, in a large majority of cases, federal tax will be payable in situations where incomes of elderly singles and couples are below \$8,175 and \$16,350 respectively. To achieve tax-free status of the magnitude indicated in Table III-4, income must come from particular sources and, in the case of the couple, must be distributed in a particular way.

Table III-5 provides estimates of the impact on government revenues of the personal income tax provisions related to the retirement income system. Although a rough estimate of the total impact on government revenues can be derived by simple addition and subtraction, the figure will not be precise. This lack of precision is due to the progressive income tax rate structure, which results in some interaction between the various provisions; the joint impact of the provisions is not simply the sum of their individual revenue impacts.

Table III-5

Estimated Personal Income Tax Revenue
Implications of Pension-Related Items
1976 Taxation Year(1)

	(\$ millions)	
	Federal Tax	Provincial Tax
Revenue Loss from Deductions		
C/QPP contributions	-210	-115
RPP contributions	-460	-250
RRSP contributions	-525	-280
Sub-total	-1,195	-645
Revenue Loss from Non-Taxation of Investment Income Accruing Within Retirement Plans	-1,500	-750
Revenue Losses from Exemptions (including transfers between spouses)		
Age exemption	-115	-65
Pension deductions	-70	-40
Sub-total	-185	-105
Revenue Gains from Items Included in Income		
C/QPP benefits	80	45
OAS pension income	110	60
Private pension income	290	150
Annuity income	25	10
Sub-total	505	265
Estimated total impact on government revenues	-2,375	-1,235

(1)1976 is the most recent year for which actual income tax return data were available. The 1977 tax structure has been used, as if it had been in force in 1976, because of the substantial changes that were subsequently made in federal-provincial fiscal arrangements.

4. Services Received by the Elderly. In addition to the resources that flow to the elderly through public pension programs, their well-being is enhanced by access to goods and services at a cost below the 'going rate'. The information necessary to estimate the value to the elderly of such goods and services has not been compiled. Even if it were available, important questions would arise with regard to the services to be included. The following section seeks only to outline the nature of such services and to provide a framework for their classification.

An essential distinction between programs such as the GIS on the one hand, and the OAS and C/QPP on the other, is that benefits payable under the former are conditional on the current income of the elderly, while under the latter, benefits are paid to the recipient without regard to his or her current economic circumstances. This distinction between unconditional and conditional programs can also be used in classifying services that have particular relevance to the elderly.

Governments provide a wide range of goods and services that are available (or potentially available) to all citizens, regardless of their current economic circumstances. Indeed, large proportions of government expenditure - such as those on education and health, roads and defence - have this characteristic. However, these expenditures often have particular relevance to identifiable groups. The services dispersed by the education system, for instance, are obviously of particular benefit to the young, while the money to pay for education comes from the general revenues of the federal and provincial governments and from taxes on property. One group - those with school-age children and post-secondary students - thus receives a net transfer from the rest of the population in respect of educational services.

Similarly, the goods and services dispensed through the health system are available to all on an unconditional basis, but are of particular importance to the elderly. A rough estimate is that the resources flowing to those 65 and over through provincial hospital and medicare programs are, on a per capita basis, about triple those flowing to those under 65. Thus, the health system is of considerable importance to the elderly. Like the OAS and the C/QPP, the provision of health services is, in general, not conditional upon the economic circumstances of the recipients, although some provinces which charge medical and/or hospital insurance premiums reduce them on an age- and income-related basis. The same may be said of a portion of the public resources flowing to nursing homes and homes for the aged, and to programs which reduce or eliminate the cost of drugs for the elderly.

The welfare system and 'rent-to-income' public housing are the principal examples of programs which - like the GIS - are conditional upon the current economic circumstances of the recipient. The resources flowing to public housing are significantly concentrated among those 65 and over. A rough estimate is that the resources directed to the income-tested housing programs for the elderly are equivalent to some 10 to 20% of the resources flowing to the elderly under the GIS.

The health and public housing systems are the principal examples of services that have particular relevance to the elderly. Benefits from the health system are generally not conditional on the current economic circumstances of the recipient and are, in this sense, similar to the OAS; benefits from the housing system are, in general, so conditioned and thus bear a similarity to the GIS.

There are also a number of services available to the elderly on a subsidized basis - public transit, banking services, and so on - but they are all of relatively minor importance.

B. Employer-Sponsored Pensions

The following description of the employer-sponsored pension system is of necessity somewhat lengthy, reflecting the large variety and complexity of employer-sponsored plans.

There are two basic types of employer-sponsored pension plans, usually designated as defined contribution plans and defined benefit plans. In 1976, each type accounted for about one-half of the over 15,000 plans in Canada. However, since defined contribution plans are overwhelmingly concentrated among smaller employers, this measure exaggerates their importance. In fact, less than 5% of all covered employees belonged to such plans.

For a pension plan to qualify as a Registered Pension Plan under the Income Tax Act, employers must contribute to the plan. Where employees also contribute, the plan is described as contributory; where they do not, it is non-contributory. Defined contribution plans and defined benefit plans can be either contributory or non-contributory on the part of the employee.

Under the defined contribution type of plan, regular contributions are made to each employee's account by the employer and, if the plan is contributory, also by the employee. Contributions may be based on a fixed percentage of the employee's annual earnings, say 5%, in which case it is described as a money purchase plan. Alternatively, the contributions may be related wholly or in part to the level of an employer's profits, in which case it is a profit sharing plan.(7) In either case,

(7) In addition to profit sharing pension plans, there are two other types of profit sharing plans which may provide retirement income but which are not RPPs. The most numerous type is the Deferred Profit Sharing Plan (DPSP), of which more than 21,500 had been registered with the Department of National Revenue as at the end of 1978. Ninety-five per cent of these plans cover only a small number of persons each, usually shareholders of a company; the other 5% cover employees of some large employers and include some multi-employer plans. As in the case of pension plans, there are several rules for registration. These include: allocation of employer contributions among plan participants; handling and investment of funds; vesting of allocated amounts; and the manner of payment of vested amounts to employees. Employee contributions to DPSPs are not tax-deductible, which is one of the main characteristics that distinguishes them from profit sharing pension plans which qualify as an RPP. Employer contributions, on the other hand, are tax-deductible by the employer within specified limits. The earnings on the contributions are free of tax until they are paid out. Employees Profit Sharing Plans (EPSPs) constitute a second sort of profit sharing plan. These plans were the forerunner of the DPSPs. Employer contributions to EPSPs are tax-deductible; the employee is taxed annually on his share of the employer contributions and also on his share of the annual earnings of the plan.

the contributions - together with the income or capital gains received from the investment of past contributions - are used to purchase for the employee a life annuity that becomes payable at the time of retirement. This annuity may be purchased at the time of retirement or may be comprised of a series of small deferred annuities purchased as the contributions are made while the employee is in the plan. The size of the resulting pension depends on a number of factors: the amount contributed during the employee's working life; the timing of the contributions (the earlier the contribution, the more time to accumulate investment income); the rates of return earned during the period of accumulation; and the annuity purchase rate, which is determined by interest rate and mortality expectations at the time the annuity is purchased. These characteristics of defined contribution plans indicate that there is a good deal of similarity between saving for retirement through such a plan and saving privately.

Defined benefit plans, which cover more than 95% of the members of employer-sponsored pension plans, appear at first glance to differ substantially from defined contribution plans. The pension paid to the member of a defined benefit plan is calculated according to a formula. The most common types of defined benefit plans are the final or best average, the career average and the flat benefit plans.

In the case of a '1% best five-year-average plan', a person retiring with 25 years service, who had an average salary of \$20,000 in the five highest earning years, would receive an annual pension for life calculated on the basis of 1% of average salary over those five years multiplied by the number of years of service. In this example, the annual pension would come to \$5,000 ($0.01 \times \$20,000 \times 25$).⁽⁸⁾

In a career average plan, benefits are related to average wages or salaries throughout the period the employee is with the employer, not just to those few years of service in which earnings were highest. Thus, if the employee referred to in the best average plan above had been in a 1% career average plan instead and had an average salary of \$12,000 during his entire 25-year career, his annual pension entitlement would have been \$3,000 ($0.01 \times \$12,000 \times 25$).

In flat benefit plans, employees are promised a fixed number of dollars of monthly pension per year of service. For instance, a \$10/month per year of service benefit would provide a member with 25 years of service with a monthly pension of \$250, or an annual pension of \$3,000.

⁽⁸⁾Plans of this kind are usually arranged so that they are integrated with, rather than stacked on top of, the C/QPP. While integration may take various forms, usually contribution rates and benefits are both reduced from the level that would otherwise apply to take account of contributions to the C/QPP and the pension entitlement provided by those public plans. For simplicity, such integration is not taken into account in the description here.

Discussion at the end of this section will elaborate on this brief description of defined contribution and defined benefit plans.

1. Coverage. At the beginning of 1976, some 3.9 million people were members of employer-sponsored pension plans; 45% of these members worked for employers in what might be defined broadly as the public sector (including the three levels of government and their agencies, school boards, Crown corporations, and most hospitals and universities).

Table III-6

Estimated Membership in Employer-Sponsored
Pension Plans, 1947 and 1976

	Private Sector		Public Sector(1)		total
	(000's)	% of total	(000's)	% of total	
1947	550-660	70-75	200-250	25-30	750-910
1976	2,147	55	1,755	45	3,902
Compound annual growth rate	4.2-4.8%		7.0-7.8%		5.2-5.9%

(1)The Canadian Armed Forces are included in public sector data in this table and in the pages that follow.

Table III-6 indicates that the proportion of total membership accounted for by the public sector has risen from between 25 and 30% in 1947 to 45% in 1976. This change reflects two factors. Firstly, pension coverage in the public sector has expanded. Secondly, employment in the public sector has increased relative to the private sector. This increase is accounted for in part by the fact that the public sector is now largely responsible for some institutions and organizations previously in the private sector such as hospitals and electric utilities.

In 1976, the latest year for which detailed figures are available, only 48% of paid workers in Canada were members of employer-sponsored pension plans. If part-time workers, unpaid workers and workers under age 25 and over age 64 are not considered as part of the potential membership of employer-sponsored plans, an estimated 62% of potential members were covered by an employer-sponsored pension plan in 1976. There is, however, a substantial difference in coverage between the public and private sectors. In the public sector, virtually all of full-time paid employees in the 25 to 64 age group belonged to employer-sponsored plans. In contrast, coverage in the private sector of this age group of full-time paid employees is estimated at around 50%.

The proportion of full-time paid workers in Canada aged 25 to 64 who are currently covered by all employer-sponsored pension plans, and the relative percentage of coverage in the private and public sectors, are illustrated in Figure III-6.

FIGURE III-6

**Estimated Proportion of Full-Time Paid Workers in Canada Aged 25-64
Covered by Employer-Sponsored Pension Plans, 1976**

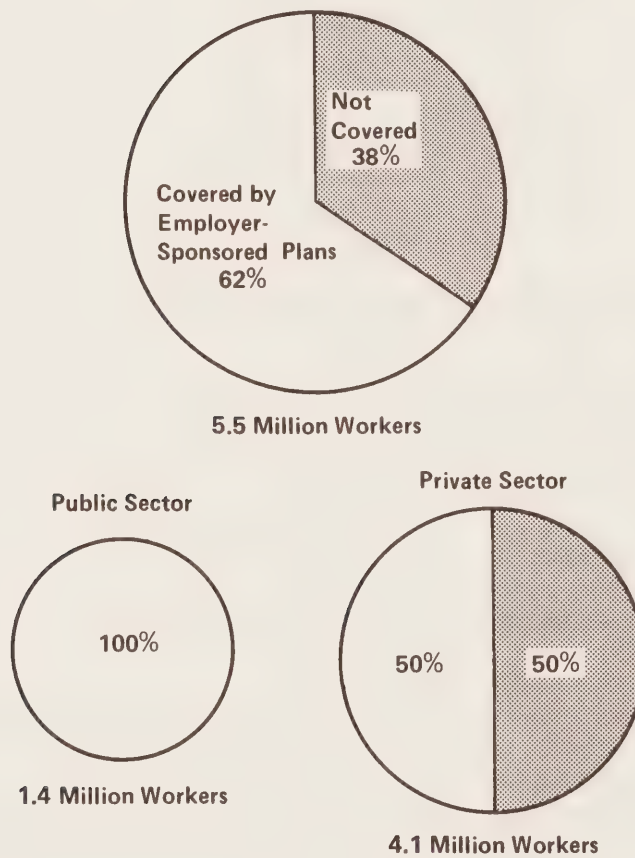
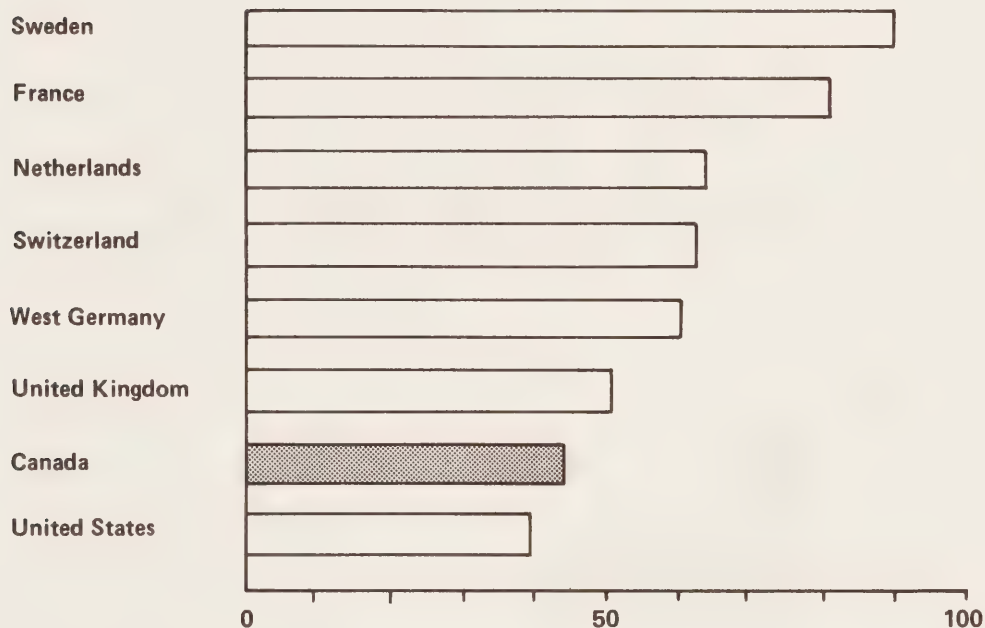


Figure III-7 indicates that, in 1976, out of eight representative industrialized countries, only the United States had a lower proportion of paid workers covered by employer-sponsored pension plans than Canada.

FIGURE III-7

Proportion of Paid Workers in Canada and Seven Other Countries Covered by Employer-Sponsored Pension Plans, 1976



Approximate

Pension plan coverage within the private sector varies significantly by industry. Although data limitations prevent precise measurement, Statistics Canada figures indicate that coverage ratios are much below average in the wholesale and retail trades, in community, business and personal services and in agriculture. While almost half the paid workers in the private sector are employed in these areas, pension plan coverage appears to be only half as high in them as it is elsewhere in the private sector.

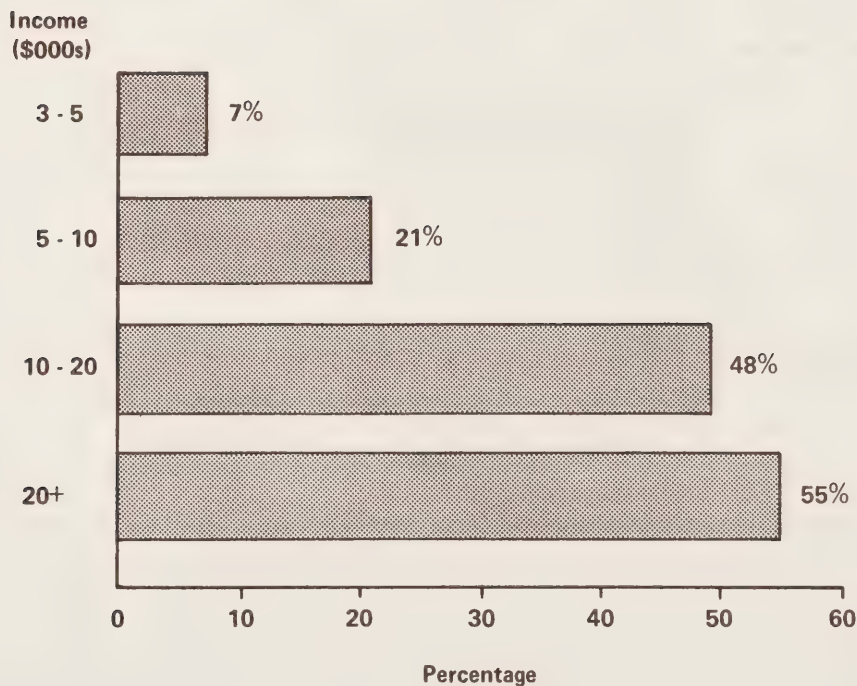
Within the private sector, coverage is also related to the size of employer. Almost all large firms have pension plans, whereas many smaller firms do not. Although there are almost 15,000 employer-

sponsored pension plans in the private sector, which have more than two million participants, more than two-thirds of these people are covered by the largest 328 private sector pension plans; and over 90% of those covered belonged to plans with at least 100 members.

Those with low earnings from employment are also a good deal less likely to be members of employer-sponsored pension plans than those with higher earnings. Data covering members of all pension plans are not available, but income tax records in respect of members of contributory plans, which in 1976 contained some three-quarters of all plan members, show that plan participants were significantly concentrated in higher-income groups. Figure III-8 indicates the proportions covered.

FIGURE III-8

**Percentage of Tax Filers with Employment Income
Reporting RPP Contributions in 1976, by Income Class**



These variations influence the extent to which the employer-sponsored pension system covers women since they are more likely than men to be employed in small firms in low coverage industries and to have low earnings. Figure III-6 indicated that in 1976 one-half of the full-time paid workers aged 25 to 64 in the private sector were plan members. It is estimated that, for men, the corresponding ratio is something under 60%, and for women it is around one-third.

Within the private sector it is likely the case that the principal determinant of pension plan coverage is size of firm. The vast majority of employees not now members of plans work for firms with fewer than 100 employees.

The lack of coverage among smaller firms appears to be the result of several factors. They include:

- low levels of unionization, high levels of labour mobility, and perhaps a higher proportion of younger employees (who tend to be less interested in pension plans) in many industries characterized by small employers, all of which result in fewer demands for pension benefits;
- a reluctance by the owners of small firms to accept the risks involved in a defined benefit pension plan;
- administrative costs which can, in the case of small plans, be significant relative to the employer's contribution to the funding agency; and
- limited efforts by sales representatives of insurance and trust companies and actuarial consultants - all of whom market pension plans - to seek out the smaller employer because the amount of effort to close a sale is large in relation to the potential commissions or fees that would be generated.

It is also possible that there is some recognition that lower paid employees would be better off not participating in a Registered Pension Plan. For employees with very low incomes, due either to low wages or marginal attachment to the labour force, or both, the benefits from the tax deductibility of RPP contributions are small or non-existent. Furthermore, the pension income that is ultimately received serves to reduce entitlement to public pension benefits which are income-tested. In those cases where incomes are so low that little or no tax saving results from membership in a plan during the pre-retirement period, and where subsequent RPP benefits serve to reduce benefits from public programs by an equivalent amount, it is clear that the participants are worse off for having been members of a Registered Pension Plan.(9)

(9)These points are discussed in more detail in Chapter IV.

Future increases in coverage of the employer-sponsored pension system will likely depend on changes in the industrial structure. If employment in large firms in the private sector, or the public sector generally, were to expand relative to other sources of employment, it is likely that the overall coverage of pension plans would increase. In addition, coverage may increase as a result of the inauguration and expansion of multi-employer plans.

Critically important considerations are raised by the vesting provisions of employer-sponsored pension plans. Either by law, or under the terms of the plan, an employee may acquire a vested right to a pension benefit, payable when he has reached a certain age, after he has satisfied specific conditions. If, for example, the terms of the plan provide that, after ten years of service, an employee acquires a vested right to a pension benefit, he would forfeit that right if he were to leave or be dismissed prior to that time. In that case, he would be entitled only to a return of his own contributions - usually with interest, but generally at a lower rate than that earned by the pension fund. An employee who remained beyond the ten-year vesting period would be entitled to receive a pension when he reached pensionable age, even if he should subsequently leave the employer before reaching that age. Most contributory employer-sponsored plans contain a conditional vesting provision under which an employee who leaves the employer retains his vested pension rights only if he does not withdraw his own contributions to the plan. This situation does not arise in the case of plans to which employees are not required to contribute, nor in cases where the employees' contributions remain locked into the plan by law.

Table III-7 shows the type of vesting provisions and the change in their incidence since 1965, when the first of the present provincial and federal acts regulating private pension plans came into effect. Most federal and provincial statutes provide that, at a minimum, benefits must be vested in an employee if he has reached 45 years of age and put in 10 years of service with an employer having a pension plan. The table shows that vesting provisions have improved markedly over the period shown. For instance, in 1965, 22% of plan members were in plans with no vesting provisions. By 1976, only 1% of members were in such plans (in provinces without pension benefit legislation). Similarly, in 1965, 37% of members were in plans with either immediate vesting, or vesting with 10 years of service or less. In 1976, 60% of members were in plans with such provisions.

Table III-7

Vesting Provisions
Percentage of Members Covered by Various Rules

	1965	1976
Immediate	7	6
10 years of service or participation or less	30	54
11 to 19 years of service or participation	9	8
20 years of service or participation or more	15	4
45 years of age and 10 years of service	nil	15
Other(1)	17	13
No vesting	22	1
Total	100	100

(1)'Other' refers mainly to an age only or to an age and service requirement (other than 45 and 10).

Note: Numbers may not add due to rounding.

Source: Pension Plans in Canada, Statistics Canada.

Vesting provisions are generally better in the public than in the private sector. In 1976, for example, 85% of public sector plan members were in plans in which benefits were vested within ten years of commencement of service or participation; the corresponding figure for private sector members was 39%. Almost one in four members of private sector plans belonged to a plan with the minimum '45 and 10' vesting standard. In the public sector, the corresponding figure was only 4%.

For reasons discussed later, it should be noted that the value to plan members of this trend toward earlier vesting is limited unless the deferred pensions of terminated employees are adjusted for inflation between the time of their termination and the time of their retirement. Indeed, without such adjustments, with even moderate rates of inflation, many of these deferred pensions will be worth very little - much less in some cases than the annuity a member could purchase with the return of his own contributions.

Table III-8 provides an indication of the range of vesting requirements in several countries. It suggests that those prevailing in Canada are more limited than those in the other seven countries listed.

Table III-8

Minimum Vesting Requirement
for Employer-Sponsored Pension Plans

Country	Age	Plan Membership (years)	Notes
France		immediate	
Sweden	28	immediate	for white collar workers
Netherlands	any age	1	
Switzerland	any age	5	9 months proposed
United States	any age	10	alternative provisions for partial vesting
United Kingdom	26	5	
West Germany	35	10	earlier vesting possible if employee has worked for employer prior to joining plan
Canada	45	10	

The vesting provisions that generally apply in Canada give rise to an important distinction between coverage of a pension plan at any given point in time and coverage over time. While an individual may be enrolled in a number of plans throughout his working life, in the absence of full and immediate vesting, he could still have far fewer years of pensionable service to his credit when he enters retirement than the number of years he actually worked. In practice, of course, very few employer-sponsored pension plans offer full and immediate vesting. Because of the high level of labour mobility in our economy and the extended period required before vested pension rights are acquired, an employee can have worked for a number of employers and contributed to a number of plans without ever becoming qualified for such benefits.

A study of mobility of Canadian males undertaken for this report concluded that the average worker can be expected to work full-time for six different employers during his labour force years. The study suggests that if all male employees were always pension plan members, and the vesting provisions of all plans were age 45 and 10 years service, males entering the labour force today could expect, on average, to have only around 20 years of pensionable service at retirement.⁽¹⁰⁾ Furthermore, there is a good deal of dispersion around this average. For example, the mobility pattern of some 15% of males is such that they would have no years of pensionable service despite complete pension plan coverage, while another 15% would have 15 years or less. Note that since, on average, females are more likely to have an interrupted attachment to the labour force than are males, and to change employment more frequently, the results would have been worse for females than for males.

(10)The study limited itself to male workers. See Appendix 8.

In summary, there has been some improvement over the past several years in the coverage and vesting standards of private employer-sponsored pension plans. But large gaps still remain in the coverage of employees by pension plans in the private sector. This factor, combined with the absence of full and immediate vesting provisions for a highly mobile labour force and the failure to update the vested benefits of terminated employees, results in a situation in which many workers are unable to accumulate significant pension benefits.

2. Benefits.

a) Types of Plans and Benefit Rates. Table III-9 shows the distribution of various types of pension plans in the public and private sectors.

Table III-9

Distribution of Employer-Sponsored Pension Plan Members
by Category of Plan and by Sector, 1976

	Public Sector	Private Sector (%)	Both Sectors
Final or best average	89	29	56
Career average	9	25	18
Flat benefit	1	35	20
Defined contribution	1	9	5
Other	0	2	1
Total	100	100	100

Source: Pension Plans in Canada, Statistics Canada.

In both the private and public sectors, the vast majority of members are enrolled in plans which are of the defined benefit, rather than the defined contribution type. In the private sector, membership in three different types of defined benefit plans - flat benefit, career average, and final or best average - is divided more or less equally. In contrast, nearly 90% of members in the public sector belong to plans which calculate benefits on the basis of final or best average earnings. Generally speaking, there has been a gradual trend toward final or best average plans, which tend to provide the greatest protection against inflation during the period in which benefits are accruing. In 1960, just under 50% of plan members were in final or best average plans. In 1976, 56% of members were in these types of plans. Similarly, the proportion of members in flat benefit plans grew from around 9.5 to 20% over the same interval. Many of these plans are also operated by their sponsors in such a way as to preserve the real value of accruing benefits. The types of plans that declined in relative terms were of the career average and defined contribution types.

The size of promised benefits in final or best average plans, and career average plans, has also been increasing, as shown in Table III-10. Parallel improvements have also occurred for flat benefit plans. The table shows that the percentage of plan members in plans providing benefits based on 2% or more of career average earnings for each year of service has increased from 30% in 1965 to 62% in 1976. The percentage of plan members in plans applying the same 2% rate to final or best average earnings rose from 66 to 80%.

Table III-10

Benefit Rates in Unit Benefit Plans, 1965 and 1976
Percentage of Members with Different Benefit Rates

Benefit Rate	Career Average		Final or Best Average	
	1965	1976	1965	1976
			(%)	
Less than 1.0%	3	5	1	1
1.0 to 1.49%	10	4	13	7
1.50 to 1.99%	47	22	12	8
2.0% and over	30	62	66	80
Variable & misc.	10	6	9	5
Total	100	100	100	100

Note: Numbers may not add due to rounding.

Source: Pension Plans in Canada, Statistics Canada.

b) Portability. One of the most important benefit provisions in any pension plan relates to the portability of pension credits by members of the plan whose employment terminates before reaching the normal pensionable age. The word portability may be used in two quite different ways. The first, which has already been outlined, refers to the vesting provisions which grant to employees the rights to the portion of the benefit deemed to be provided by the employer's contributions. The second use is in relation to transfer arrangements whereby an employee's service and salary with a prior employer can be included in the pension calculation made by a subsequent employer. These transfer arrangements normally require the transfer of funds between the two plans; or they may result from the participation of both employers in a multi-employer plan with a single pension fund, in which case no actual transfer of funds would be required. In the absence of transfer provisions, and prior to having a vested benefit, a terminating employee under a contributory plan receives only a return of his own contributions, usually with some interest. He receives nothing on terminating from a non-contributory plan in these circumstances.

The provisions covering transferability of funds are more common in the public than in the private sector. In particular, transfer of funds portability was introduced in 1954 between the federal government and other large public employers and since 1960 has been extended to private employers. While the number of these agreements between public and private sector employers is gradually increasing, it is still small.

Private employers generally have been hesitant about going as far as public employers in encouraging mobility of employees. Recognizing that the private sector should be taking steps to promote this type of portability, the Canadian Life Insurance Association has developed an arrangement for transferring service credits between different plans and it is attempting to put this arrangement into effect among its member companies as a pilot project. The Association hopes that this example will encourage other employers to introduce similar portability provisions with respect to their own plans.

In its report, Pension Plans in Canada, 1976, Statistics Canada pointed out that one of the most distinctive features of plan developments in recent years had been the growth of multi-employer plans, many of which were union initiated - if not union negotiated. These plans ensure automatic portability when an employee moves between employers who are partners in the plan. Figures on the number of employees in such plans are not published, however, due in part to the difficulty of defining what is meant by a multi-employer plan. Such a plan, in its broadest sense, could include the various federal, provincial and municipal governments' plans for their own employees. Generally the term is more narrowly defined to embrace only those plans where the employing firms are not financially related. Using this narrower type of definition, which also excludes the large governmental plans and plans which cover employees of affiliated companies, there were just under 200 multi-employer plans in Canada in 1976, mainly in the private sector. These plans included more than half a million members representing about 13% of total pension plan membership. These plans are common in the construction and forestry industries, but they are still very much the exception in the private sector as a whole.

c) Inflation Adjustments. In the pre-retirement period (for an employee who remains in the plan until retirement) there is more or less automatic adjustment for inflation in the case of final or best average pension plans; the initial pension is based on salary levels near the end of an employee's career and these will generally reflect inflationary trends. In other types of defined benefit plans, the effect of inflation during the pre-retirement period is often taken into account through ad hoc adjustments. Flat benefits, for example, are often increased as part of the process of collective bargaining. The greater prevalence of final and best average plans in the public sector suggests that adjustment for inflation in the pre-retirement period is more complete there than in the private sector.

Tomenson-Alexander Associates conducted a survey on the frequency and amount of post-retirement adjustments of pensions-in-pay in the private sector as part of its Report on Certain Aspects of the Public Service Employee Pension Program, which was tabled in the House of Commons on March 7, 1978. Data on the extent and nature of the pension adjustments were not complete, however, since the survey was confined to plans which had a minimum of 500 active participants as of December 31, 1975. Replies were received in respect of 149 plans covering 460,235 employees, which represented some 21% of the employees covered by plans in the private sector as of that date. Although reservations were expressed by the consultants that their sample may not have been fully

representative of the total population of plans and of covered employees, the survey showed that 117, or nearly 80% of those 149 pension plans, provided some form of post-retirement adjustment during the five years from 1971 to 1975.(11) Within that group, the level of these adjustments averaged 66% of the change in the CPI.

The Canadian Manufacturers' Association has reported that 80% of its member companies surveyed in Ontario, employing 1,000 or more employees, had provided increases in current pension payments to help overcome the effects of inflation. (No information was provided as to the size or timing of such increases.) The figure dropped to 28% for firms in the 101 to 999 employee bracket and to an even lower figure for those with 100 employees or less. While this report covered 244 employers, more than the Tomenson-Alexander survey, it was confined to Ontario and did not provide equally detailed information. A more limited survey carried out by the Canadian Pension Conference, in a questionnaire sent to its members especially for this report, and another survey by the Financial Executives Institute, similarly suggest significant adjustments are common for employers with 500 or more employees.

While none of these four surveys was close to being fully representative, each suggests that adjustments to pensions-in-pay were general among employers with 500 or more employees, but much less common among smaller employers. A rough estimate is that, over the last five years, the pensions of those who formerly worked in the public sector have been adjusted to correct on average for something over half the inflation that occurred. In the private sector, such adjustments are estimated to have corrected for well under half the inflation that occurred.

Adjustments for inflation, then, vary widely, the size and nature of the employer being important factors in determining the outcome.

This evidence, taken together with the coverage data discussed earlier, indicates that those among the elderly who worked for smaller firms are not only less likely to have pensions than those who worked for larger firms, but also that they are less likely to have them corrected for inflation.

d) Survivorship Provisions. Another important aspect of the benefit structure of pension plans relates to the variations in their survivorship provisions.

(11) Only 16 of the plans had formal plan provisions providing for post-retirement adjustments; the other 101 made them on an ad hoc basis. Eleven of the plans were funded in advance for the adjustments, while the remaining 106 established an employer liability when the adjustments were made. Seventy-four of the latter discharged this obligation through plan surpluses entirely, or partly by surpluses and partly by amortizing the balance of payments over a period of time, as would be done to discharge any other unfunded liability. The remaining 32 plans reported that their adjustments in whole, or in part, were financed through general corporate revenues.

While most employer-sponsored pension plans provide for some form of benefit for a surviving spouse on the death of a member, there is no consistency in the way that this is done. The majority of the surviving spouses of pension plan members can end up with no pension at all, or with payments that may not last throughout their lifetimes.

As indicated by Table III-11, in 1976 only some 45% of members of all plans (71% of public and 24% of private sector plan members) belonged to plans which provided automatic pensions for their spouses on death after retirement. In these plans, the pension is usually 50% of the member's pension.

Table III-11

Survivor Benefit Coverage of Pension Plan
Members on Death after Retirement, 1976

Type of Survivor Benefit	Public Sector	Private Sector	All Plans
	(% of plan members)		
Automatic	71	24	45
Guarantee period	8	46	29
Balance of employee contribution	7	5	6
Other	5	6	6
No benefit	9	20	15
Total	100	100	100

Note: Numbers may not add due to rounding.

Source: Pension Plans in Canada, 1976, Statistics Canada.

Most plans that do not provide for automatic survivor benefits offer retiring employees the option of taking a reduced pension determined on an actuarially equivalent basis so as to provide a continuing pension to the spouse on the death of the plan member. As a result of the actuarial equivalence provided for, survivor benefits of this nature do not entail extra cost, unlike automatic survivorship provisions.

Table III-11 indicates that 29% of all plan members in 1976 belonged to plans providing a guarantee that a member's pension would be paid for a specified period - most frequently five years. (The guarantee periods apply if a reduced pension is not chosen.) Under a plan with a five-year guarantee, if the pensioner died after three years, the pension would continue to be paid to his spouse for a further two years.

Some 6% of plan members were in plans that provided survivors with a return of the balance of the member's contributions, usually with interest, and a further 15% were in plans which had no survivor benefits (although most of these plans offered members the option of taking a reduced pension as noted above).

These data suggest that survivors, particularly those associated with private sector pension plans, receive only a small proportion of pension payments. Provisions of the kind described undoubtedly contribute to the high incidence of poverty among the single elderly, particularly widows.

e) Disability Provisions. Unpublished Statistics Canada data, covering just over 90% of members of employer-sponsored pension plans, show that 68% of all those members covered in the survey were eligible to receive fully accrued pensions in the case of disability prior to the normal pensionable age. This included 84% of those in public sector plans and 57% of those in private sector plans. Like the C/QPP, most plans had a qualifying period of service for disability benefits ranging from 5 to 15 years, with 10 years being the most common. Private plans are generally less restrictive in defining a disability than are the C/QPP. (In addition, and quite apart from these provisions, a wide range of other types and levels of benefits is available under pension and disability insurance plans.)

f) Value of Benefits in Public and Private Sectors. From the above, it is apparent that final average plans, early vesting, inflation adjustment after retirement, and survivorship and disability provisions are more common in plans offered by employers in the public sector than in the private sector.

A comparison of the average 'value' to employees of their employers' pension contributions in the two sectors is difficult to make. It is not simply a matter of dividing employers' contributions by the number of employees year by year. Two plans with the same level of employer contributions per employee may have quite different benefit provisions. Factors such as the age and sex distribution of employees and their rate of turnover, different rates of promotion, different investment experience, and so on, can produce quite disparate results. Two companies in different industries, for example, might maintain plans offering identical pension benefits which result in quite different costs. If the degree of worker mobility is considerably higher in one industry than the other, with the result that a smaller proportion of employees remains long enough to acquire a vested right to pension benefits, the aggregate amount of benefits paid to employees will be lower and so will the pension plan costs of the employer.

As a result of these factors, no completely satisfactory method has yet been developed for comparing the value to the employee of benefits offered by different employer-sponsored pension plans. The problem is compounded, of course, by the difficulty of establishing comparative values of differing pension plan benefit provisions. Rough techniques applied by the federal Pay Research Bureau, in an effort to make a comparison between a number of different establishments, have produced results which indicate that public sector employers (including provincial governments, municipalities, hospitals, universities and Crown corporations) generally provide their employees with a substantially higher level of pension contributions than do employers in the private sector. A similar conclusion was reached by the Tomenson-Alexander study with respect to federal public service employees.

While the amount of employer pension contributions per employee is generally higher in the public sector, as will be seen below, the average employee in that sector also contributes a higher percentage of his salary toward his pension. This combination of factors results in public sector plans with benefit levels that are, on average, substantially higher than those of plans in the private sector.

3. Pension Contributions in the Public and Private Sectors. In 1976, there were over 700 plans covering 1.75 million employees in the public sector, compared with almost 15,000 plans covering 2.15 million employees in the private sector. In the public sector, 99% of the members were in contributory plans, representing a slight increase in the contributory membership percentage since 1970. In the private sector, however, the proportion of employees in pension plans who contributed dropped significantly from 62% in 1970 to 53% in 1976.

Accordingly, it is not surprising to note that, on average, employee contributions finance a higher proportion of the pension benefits available in the public sector than in the private sector, as shown in Table III-12.

Table III-12

Employee and Employer Pension Contributions, 1975(1)

	<u>Public Sector</u>		<u>Private Sector</u>	
	<u>\$ millions</u>	<u>%</u>	<u>\$ millions</u>	<u>%</u>
Employee	1,042	41	507	26
Employer	1,530	59	1,478	74
Total	2,572	100	1,985	100

(1) The employer contributions in this table include payments in respect of unamortized liabilities.

Source: Pension Plans in Canada, 1976, Statistics Canada.

Within these global amounts, there is a wide variation in the rates of both employer and employee contributions, depending on the nature of the plan, investment experience, employee characteristics, and so on. Unpublished data from the 1976 All-Industry Labour Costs Survey of Statistics Canada indicate that among employers providing pension plans, the average employer contribution as a percentage of payroll ranged from 2.8% among reporting units with 50 to 99 employees, to 4.1% for those with 500 to 999 employees, and 8.1% among those with 5,000 or more employees. As public sector employers are large, it seems likely that their contributions are in the upper range.

In a recent study prepared for the Economic Council of Canada, data from three more recent surveys of costs for Canadian employers' pension plans were examined.⁽¹²⁾ The results of this study are consistent with the above Statistics Canada data; the study suggests that employer pension costs in recent years have been, generally speaking, between 3 and 12% of payroll, the mean being in the order of 5 to 7% in 1977. In 1969, the mean was some 1 1/2 percentage points lower. The increase was primarily due to payments required to amortize past service costs and experience deficiencies; the experience deficiencies are associated with high rates of inflation and higher than expected wage and salary growth in recent years. Current service costs have remained a relatively constant percentage of payroll costs. The study suggests that both experience deficiencies and past service costs are likely to decline if there are no unanticipated developments. The study also notes that, over the last few years, some employers have been worried about their rising pension costs and that this worry has been exacerbated by fears of further cost increases due to employee and pensioner pressures that their pensions be better protected against inflation.

The same study notes that average employer costs for employer-sponsored plans in 1977 appear to have been slightly above the levels experienced in the early 1960s - the previous high point in employer-sponsored pension costs - which was, of course, prior to the introduction of the C/QPP. In 1977, the average employer cost of the CPP is reported as 1.2% of payroll.

4. Financing of Pension Plans. In employer-sponsored pension plans, an effort is generally made to set aside sufficient funds in each year to cover future pension benefits of employees as they are earned. However, in the case of defined benefit plans, it is not possible to determine with precision the cost of the accrued benefit at a given point in time. This is because the eventual cost of the benefit is governed by future events, none of which can be predicted with certainty. The principal factors are: rates of investment return, rates of salary growth, rates of inflation, the age and sex profile of plan members, their mobility pattern, and changes in life expectancy. Accordingly, actuarial estimates have to be made of these and other variables. Amounts that are estimated to be sufficient to pay for future benefits on the basis of these calculations are then set aside and invested. This method of financing a pension plan is referred to as funding.

(12)W.R. Waters, Pension Costs and the Competitive Position of Canadian Firms, Economic Council of Canada, 1979.

Funding serves two main purposes. From the point of view of the plan member and pensioner, the fund affords a degree of security in respect of his earned benefits independent of the future financial position of the employer. From the point of view of the plan sponsor, the funding helps in the proper allocation of costs.(13)

Funding rules are established in the pension benefits legislation of those jurisdictions that have such laws. These rules specify what is to be done when the amount in the pension fund is not adequate to meet the estimated future obligations. While these rules apply to all private sector plans in these jurisdictions, many public sector plans are exempt, as noted below.

a) The Particular Circumstances of Public Sector Plans. Financing arrangements and accounting practices for public sector pension plans vary more widely than for private sector plans. These differences, at least in part, reflect the fact that those pension benefits provided through the public employer plans, as a statutory right, are ultimately secured by the wealth and the tax base of the employer in more or less the same manner as are bonds issued by a government. Since the chance of insolvency of the public sector employer has been considered to be less than in the private sector, in some cases it has been judged that the funding requirements applicable to private employers need not apply.

Although some plans in the public sector have a pay-as-you-go character, many others are funded. Funding public sector plans' is in many respects the same as funding private sector plans. It involves an estimation of pension costs and a recording of the employer's share of those costs as a budgetary expense. The difference, however, lies in the fact that the employer often simply records the accrued pension liabilities as a separate debt item in his accounts, rather than investing pension contributions through the capital markets.

The advantages of this type of funding procedure - as opposed to pay-as-you-go financing - are twofold. In the first place, the existence of a separate book-entry for public employer plans strengthens the contract implicit in any pension promise and tends to increase the likelihood of the promise being honoured. Secondly, the procedure aids in the identification and allocation of employee costs, and thereby indirectly facilitates comparison of the cost of pension plans in the public and private sectors.

As mentioned, among public sector employer plans financing arrangements vary widely. Some, such as those of the provinces of Alberta and Newfoundland, operate on a pay-as-you-go basis. Others, including the federal government's basic plans and that of the Ontario government, record the estimated liabilities of the pension plans for their employees as part of their own book debt, and generally follow the

(13) This subject is currently under study for the Canadian Institute of Chartered Accountants by T. Ross Archibald.

accounting practices of private pension plans, except that the financing remains totally captive to the employer. Others still, such as the plans of the Bank of Canada, Quebec Hydro, the Ontario Municipal Employees' Retirement System, and many municipalities, have wholly separate, trustee or insured plans closely paralleling those of the private sector. The managers of plans of federal Crown agencies generally have the freedom of investment accorded to private sector plans. In many other public sector plans, the funds are invested largely in marketable or non-marketable securities of the sponsoring government or its agencies in keeping with statutory requirements or accepted practice.

It is not possible to establish with any degree of certainty the extent to which levels of taxation, government spending and government borrowing are affected by arrangements under which government employee pension plans provide governments with financing which is captive to a greater or lesser degree. However, it seems likely that unless governments credit to their pension accounts the full market rate of interest, the lower rates available on borrowings from these sources will induce greater spending or lower taxes than would otherwise occur.(14) Rates of return below those available in the market are also likely to be unfair to pension plan members because these low rates of return require higher employer pension contribution rates than would otherwise be necessary to provide a given level of pension benefits, which in turn reduces the amount of money available to provide other forms of employee compensation.

b) Unfunded Liabilities. The purpose of funding of employer-sponsored pension plans, particularly in the private sector, has already been noted. Funding is held to enhance the security of the benefits. It also aids in the proper accounting for, and allocation of, costs.

Unfunded liabilities, however, are substantial. The results of a 1975 survey by the Pension Commission of Ontario, based on 943 out of 1,487 trustee plans falling under its jurisdiction (excluding segregated and deposit administration funds operated by insurance companies) are shown in Table III-13.

(14) It could be argued, indeed, that rates paid by governments on their public service pension accounts should be somewhat above the market rates on their own publicly-held debt in recognition of the fact that most pension funds can typically earn higher returns on mixed bond and mortgage portfolios. If that were done, the added cost to governments of borrowing pension funds might well reduce the likelihood of fiscal decisions being distorted. In addition, the higher interest costs would be offset, other things being equal, by a lowering of employer contributions necessary to amortize actuarial deficiencies.

Table III-13

Average Funded Ratios of 943 Trusteed Plans in Ontario, 1975

Plans	No.	% of Plans	% of Employees	Average Funded Ratio %
Reporting unfunded actuarial liabilities	642	68	84	68
Reporting actuarial surpluses	301	32	16	113

Source: Preliminary Report on the Funded Status of Certain Pension Plans Registered With the Pension Commission of Ontario, Appendix B to the Commission's Report for the year ending March 31, 1976.

Data for 1973 on plans subject to the federal Pension Benefits Standards Act showed the average funded ratio to be 71% of estimated liabilities for all plans (including a relatively negligible portion in a fully funded position), indicating a situation very similar to that of Ontario.

The existence within a pension plan of unfunded liabilities does not necessarily mean that it will be unable to provide for all accrued benefits if the plan terminates. One reason is that most pension plans are funded as 'going concerns'. Thus, pension plans that provide benefits based on the final average or best average salaries are funded on the basis of salaries that plan members are expected to receive during a period near their retirement age. But when such plans are terminated, accrued benefits are determined on the final average or best average salaries as at the date of the termination of the plan. Generally these will be lower than would have been the case if the plan had remained in effect. Thus, sufficient funds may well be available to pay for all accrued benefits on the basis of salaries prior to the date of termination, notwithstanding the fact that on a going concern basis the plan had an unfunded liability.

A similar situation could exist in the case of a pension plan that had been very conservatively funded. In the event it is terminated, it may have sufficient assets to pay for all the accrued benefits even though actuarial calculations indicated it had an unfunded liability on a going concern basis.

The statistics in Table III-13 relate to actuarial valuations on a going concern basis, assuming that the plans will remain in effect indefinitely. On a 'wind-up or termination' basis, which assumes that the plan is valued as of the time of termination, the average funded ratio would more likely have been in the order of 85%, rather than 70%.

The Ontario Pension Commission survey also revealed figures on the total liability per member, and the amount of liability per member which was unfunded, by type of plan, for the 642 trusteed plans reporting unfunded liabilities. The results are shown in Table III-14.

Table III-14

Total Liabilities and Unfunded Portion per Member of 642
Trusteed Plans in Ontario Reporting Unfunded Actuarial
Liabilities, 1975

Type of Plan	Assets	Average Liability	Unfunded Liability	
	\$ millions	per Member	per Member	
		\$	\$	%
Flat benefit	719	7,452	3,760	50.5
Career average	526	7,431	1,473	19.8
Final average	1,038	11,438	2,164	18.9
Composite	91	9,204	1,358	14.8
All plans	2,375	8,594	2,755	32.1

Source: Ontario Pension Commission. See Table III-13.

The relatively substantial proportion of unfunded liabilities revealed in Table III-14 primarily reflects unamortized liabilities in respect of service prior to the introduction of the plan, retroactive amendments or updatings, and experience deficiencies arising from the differences between actual outcomes and those assumed when estimating costs. The main causes of the experience deficiencies were unexpectedly high salary and wage increases in the case of final average pay plans, renegotiated benefit levels in the case of flat benefit plans and, in some instances, adjustments to pensions-in-pay.

Flat benefit plans are probably the main type of pension plan in Canada where termination almost necessarily would result in a less than fully funded situation. These plans are typically union-negotiated, industry-wide (i.e. multi-employer), and non-contributory. Benefits are improved frequently, usually each time collective bargaining occurs. For instance, a benefit of \$10 monthly per year of service may be raised to \$12 monthly per year of service, applicable to all past service - including that of existing pensioners. This immediately creates a large unfunded liability. Because there is no contractual provision in flat benefit plans for the increases in benefits, which in practice occur frequently, account is not normally taken of likely future increases in benefits when funding. Thus, the margin often available in final average plans to ensure solvency on a termination basis does not exist to the same extent in flat benefit plans.

As already noted, among the causes of unfunded liabilities are experience deficiencies. The funding of future commitments, whose costs cannot be known with certainty, can only be based on estimates that reflect current expectations of future events. To the extent that outcomes in the future fail to coincide with these expectations, actuarial deficiencies or surpluses will occur. The size of these deficiencies is influenced by the particular valuation methodology employed. Liabilities are generally taken to be the discounted value of future benefits. Their measurement necessarily involves not only the uncertainty related to the size of such benefits, but also the selection of an appropriate

discount rate. Actuarial practice with respect to the valuation of assets has been diverse and the problem of how to take appropriate account of variations in the market value of assets has been accentuated by the incidence of inflation.

For example, the Financial Executives Institute of Canada has noted an increased tendency to use other than book or market values for actuarial calculations. Some 38% of respondents to a survey of pension plans in Canada (published in March 1978) used book value and 22% used market value; the remaining 40% used combinations of these two valuation methods or one of a range of other methods.

Furthermore, even the limited statistical detail available on unfunded actuarial liabilities is difficult to interpret because of the enormous discretion in the hands of the actuarial profession and of employers when determining the financial health of a specific pension fund. For instance, a survey carried out in the United States for Business Week (July 18, 1977) elicited criticism from the Continental Group Inc. The latter noted that its unfunded vested benefits had been shown to be \$208 million, in contrast to a figure of \$83 million for American Can Co. Put on a comparable valuation basis, however, the Continental Group claimed the comparison should have been either between \$208 million (Continental Group) and \$269 million (American Can) or, alternatively, between \$3 million (Continental Group) and \$83 million (American Can).

c) Amortizing Deficiencies. Once actuarial deficiencies have been identified, they have to be amortized. The manner in which, and the period over which, unfunded liabilities are amortized reflects trade-offs. These involve the desire to provide protection to plan members and pensioners through full funding, to maintain relative stability of employer pension costs as a percentage of payroll, and to enable plan improvements to be financed in a reasonable fashion.

The selection of any single amortization period is necessarily a matter of judgment, based on historical and current experience, and expectations about future trends. A period of up to 25 years, or even longer, may well afford adequate protection for a high proportion of those now in employer-sponsored plans - those employed by large and strong firms whose continuing existence is secure. There are, however, many firms whose continuity is less assured. Since it would be difficult to discriminate between employers, and since pension benefit law is necessarily concerned with securing the benefits of members of all plans, it follows that the maximum period for amortization of unfunded liabilities must be shorter than the period that would be appropriate in most cases. This consideration is reflected in current legal requirements.

Thus, when pension benefit standards legislation came into effect, those operating plans that had unfunded liabilities were allowed to amortize them over a period of up to 25 years; and as perceived half way through the period, this provision does not appear to have caused any major difficulties.(15) Nonetheless, the maximum period for amortizing unfunded liabilities originating after enactment of the legislation, whether due to the introduction of new plans or to plan improvements, is only 15 years - unless the initial period of 25 years referred to above would lapse later. In the case of experience deficiencies, even shorter amortization periods apply in some circumstances - as described later in Section 8.(16)

d) Pension Plan Termination Insurance. Section 4(b) above made a distinction between measures of unfunded liabilities of pension plans as going concerns and on termination. Although statistical information is lacking on a national basis concerning the effect of plan terminations on plan members, what evidence there is suggests that losses of benefits have not been severe in Canada. For example, data for plans supervised by the Department of Insurance indicate that few terminations take place, and that, where they do occur, a large proportion of members affected receive fully accrued benefits based on earnings to the date of termination. On the basis of experience in the federal jurisdiction, the probability that a plan member would be in a plan that terminated, and that did not provide in full for the accrued benefits to all members, appears to be in the order of 6 in 10,000.(17)

Any system of plan termination insurance must specify carefully the risks to be covered. The United States has such an insurance program. It insures only the basic benefits (taking the form of retirement annuities) that have been vested pursuant to the terms of the pension plan. Among other limitations and safeguards which were con-

(15)The Hall Commission on the Canadian Railway Pension Plans suggested 30 years for the liquidation of unfunded liabilities arising from plan amendments. The same time frame of 30 years was provided for in the United States under the Employee Retirement Income Security Act of 1974.

(16)Accordingly, sponsors of plans which had very large initial unfunded liabilities at the time the legislation was enacted, and/or which underwent a very significant improvement within the following decade, will likely experience a significant drop in their funding requirements at the end of the 25-year period, in most cases in the early 1990s, unless substantial new liabilities or deficiencies are incurred in the meantime.

(17)This experience appears to be somewhat more favourable than that in the United States, where the corresponding ratio has been placed at 10 in 10,000. As noted earlier, funding requirements in the United States are considerably less stringent than those required under pension benefits legislation in Canada. In the United States, for instance, maximum periods for funding unfunded liabilities are 30 years for single-employer pension plans and as long as 40 years for multi-employer pension plans, in contrast to the maximum of 15 years in Canada.

sidered necessary in the United States program was a requirement that new pension plans and additional benefits resulting from amendments would have to be in force for at least five years before they were fully covered by insurance, and even then there are maximum limits.

One particularly interesting facet of the United States legislation is that an employer whose pension plan terminates in a less than fully funded condition is liable to the Pension Benefit Guaranty Corporation (the plan termination insurance agency) for the amount expended by the Corporation in paying claims, up to the equivalent of 30% of the employer's net worth. The purpose is to prevent the abuse of termination insurance by employers, but the resulting contingent liability - which affects balance sheets and credit ratings - has evoked considerable negative reaction from employers.

To date, no Canadian jurisdiction has made provision for pension termination insurance.

5. Security of Benefits. The principal way in which a plan member or pensioner is assured that the pension plan will be able to deliver the benefits it has promised is through the funding practices described in Section 4. Even if a plan is funded fully, however, there are circumstances that can create difficulties for a plan member or pensioner. Several of these are described below.(18)

a) Plan Termination. Virtually all employer-sponsored pension plans contain explicit provisions permitting the plans to be amended from time to time, or to be terminated should this prove necessary.

At the time of plan termination, many plans fully and immediately vest all accrued benefits in the plan members and freeze the accrued benefits based on the earnings and credited service of the plan members at that time. Specific limitations are often placed on the right of the plan sponsor to amend the plan or to distribute the assets of the plan if it is terminated. For example, a plan may contain a provision denying the employer the right to reduce unilaterally the value of benefits accrued up to the date of amendment. Similarly, most pension plans stipulate that no part of the plan assets may revert to the employer upon plan termination until all benefits accrued up to that time to all members, deferred pensioners, pensioners and other beneficiaries are satisfied in full. Some plans also stipulate the payment priorities in the event that the assets are not sufficient to provide all of the benefits accrued. Regulations under the Supplemental Pension Plans Act of Quebec set out payment priorities which apply if a plan does not contain an appropriate provision for priority of payments. Other jurisdictions are not so specific.

(18) This section draws heavily on a paper on "Mergers, Acquisitions and Wind-Ups", James G. Paterson, presented to the Canadian Institute of Actuaries in June 1979.

Under current practices, plan termination provisions in respect of final or best average earnings plans usually result in a lower benefit payable at normal pensionable age than was anticipated under the benefit formula; it is also possible that the employer may claim any surplus that remains. These results occur because the earnings to the time of termination, on which the benefit is then based, are generally lower than the earnings that had been anticipated by the benefit formula. This reduction often more than offsets the increase in the value of the accrued benefits arising from their immediate vesting. The precise outcome will also be influenced by whether the termination involves immediate liquidation of the fund assets or their realization over a longer period to meet benefit payments as they fall due.

b) Mergers and Acquisitions. In contrast to the relative uniformity of practice on plan termination, there is a wide variation in the case of the merger of pension plans, or the merger or acquisition of employers who are providing pension plans for their employees. One reason for this is that there are important differences in legal opinions with regard to the circumstances under which pension plans and pension funds may be merged. The situation can be particularly difficult where the plan provisions and the funded ratios of the plans to be merged differ significantly. Apart from differences in intent and in draftsmanship from plan to plan, some agreements and contracts with funding agencies are subject to trust laws, some to insurance laws and so on. These laws, of course, vary from one jurisdiction to another. Complications also stem from the variety of methods which may be followed in establishing the nature and financial terms of corporate mergers and acquisitions, and the intent of the purchaser, the vendor - or both - with respect to the pension plan.

c) Bankruptcies. It does not appear to have been widely recognised that notwithstanding the benefits which may have been promised by the plan sponsor, the security of employer-sponsored pensions in Canada normally rests in legal terms solely on the amounts which have actually been, or are currently due to be, paid over to the trustee or insurer. In Bill S-14, The Bankruptcy Act, 1979, provision was made to recognize the preferred creditor position of pension and other employee benefit plan contributions due and payable up to \$500 per plan member in the event of bankruptcy. Beyond that, however, pension plans would not rank as creditors under the proposed legislation.

6. Pensions-in-Pay. Table III-15 shows that nearly 60% of the pension payments in 1976 originated from public sector plans. This is not surprising since, as already outlined, the benefit and employee contribution levels are generally substantially higher in the public sector than in the private sector, and the coverage ratio in the public sector far exceeds that in the private sector. As the table also indicates, the proportion of benefits paid from the public sector has also been growing.

Table III-15

Estimated Pensions-in-Pay from
Employer-Sponsored Pension Plans, Selected Years, 1956 to 1976

	Public Sector Plans	Private Sector Plans (\$ millions)	Total	Public Sector as % of Total
1956	63	66	129	49
1962	152	120	272	56
1968	321	248	569	56
1974	798	555	1,353	59
1976	1,130	744	1,874	60
1977	2,142	

The rapid growth of pensions-in-pay shown in Table III-15 must be interpreted with caution. Many plans were started in the decade prior to 1956; the numbers consequently reflect an important 'start-up' phenomenon. A large number of companies which introduced plans then took into account the service of employees who were at or close to retirement age; they granted these employees benefits in relation to some proportion of their past service even though the plans had not been in effect for those years. The early years in the table thus reflect the payment of pensions to some 'recent elderly', while many 'older elderly' remained without company pensions. As time passed, higher proportions of the older elderly were receiving pensions from the plans established in the 1940s and early 1950s. By the mid-1970s, much of the start-up phenomenon had run its course (although successive but smaller increases in pensions-in-pay associated with increased coverage and with benefit improvements will occur). Thus, the rate of growth of real pensions-in-pay over the next 20 years may be expected to be slower than it has been over the last 20 years, although the base will be substantially larger.

7. Pension Plans and Uncertainty. Under defined contribution plans, all the risks of an unknown future are borne by the plan members. If for any reason the inflation-adjusted rate of return earned on the accumulating assets during a plan member's working life is less than anticipated, the resulting accumulation of assets will be less rapid than planned and the lump sum available upon retirement for the purchase of an annuity will be lower than expected. The member of the defined contribution plan will, like other savers, suffer when that occurs. (Similarly, if the rate of inflation subsequently is at levels in excess of those expected at the time of annuity purchase, the purchasing power of the annuity over time will drop more than had been anticipated when it was bought.)

On the other hand, the employer who offers a defined contribution plan bears virtually no risk. His pension cost, as a percentage of payroll (or of earnings in the case of profit-sharing plans), is predictable. Pension obligations, once paid for a particular year, are forever fulfilled. These features make defined contribution plans attractive to

employers, particularly those whose competitive position requires that the costs of the pension plan as a percentage of payroll (or profits) be known with certainty.

Under a defined contribution plan, therefore, this year's employer cost is known. What, though, is this year's employer cost associated with a defined benefit plan? What funds must be set aside this year on behalf of, say, a 35-year-old employee? In most defined benefit plans, the employee's pension will depend on what his earnings will be over the years ahead. These can only be estimated; he may stay in his current position or he may become the president of the company. In any event, his earnings 30 years from now will be affected tremendously by the rate of growth of the economy, by the inflationary experience over the period, and by the performance of the employer in relation to the economy as a whole. The annual amount of funds to be set aside is also influenced by estimated investment earnings. However, rates of return are uncertain and are also affected by inflationary experience. Similarly, cost is affected by such additional factors as the employee's mobility, which affects his entitlement to a vested pension benefit, and likely age of death. With a defined benefit plan, estimates must be made of all these variables in order to establish annual employer costs. Of course, if the assumptions are all borne out, the amounts set aside year by year will turn out to be correct and the asset accumulation available at retirement will be sufficient to provide for the promised pension. But in the almost certain event that the assumptions are not borne out, the eventual cost to the employer of providing the pension may well turn out to be quite different than had been anticipated.

The employer who provides a defined benefit pension plan bears significant risks related to the uncertain future. This is one of the principal differences between plans of a defined contribution and of a defined benefit kind. In the former the risks of what lies ahead are borne by the employee; in the latter, by the employer. Where the defined benefit plan is adjusted fully for inflation, the employer's risks are further increased.

The report earlier noted a design characteristic of most defined benefit plans that narrows the differences between defined contribution and defined benefit plans just discussed; that is, under most defined benefit plans in the private sector, automatic adjustment for inflation is rare. Many of the terms of pension plans are denominated in dollars, rather than in real terms. To this extent, the employer risk associated with such a plan is much less than otherwise (and the employee risk correspondingly greater). An extreme hypothetical example will illustrate the point. Suppose a 35-year-old were promised a pension at age 65 of \$3,000 annually if he stayed with the company for the 30-year period. This promise is, of course, very different from the promise of an annual pension which had a real value of \$3,000. In the latter case, if prices tripled in the 30-year period, the promise would lead to a \$9,000 pension annually. But if the employer assumed no obligation regarding future inflation, he would adopt an assumed rate of return, say around 3%, and would set aside annually the sums necessary to build a fund capable of paying the \$3,000 pension. If inflation did occur over the

working life of the employee, the cost to the employer of the pension not denominated in real terms would fall if - as is likely - the nominal rate of investment return rose. Less would have to be set aside annually by the employer than he originally anticipated. Fixing pension promises in money terms, as in the hypothetical example, reduces employer cost, but also reduces or, more likely, eliminates the risk described above of higher than expected employer costs.

In fact, however, many defined benefit pension plans include automatic adjustment for inflation in some of their terms. As already noted, the best or final average type of plan, for example, more or less adjusts accrued benefits for inflation up to the point of retirement. But in many other types of private sector plans, adjustment for inflation, pre- and post-retirement, is on an ad hoc basis. To the extent that the terms of defined benefit plans are not adjusted automatically for inflation, they can potentially take on some of the characteristics associated with the hypothetical \$3,000 pension in the example above. That ad hoc adjustments are made both pre- and post-retirement to offset at least some of the effects of past inflation is an important piece of information about the employer-sponsored pension system. But the fact that the adjustments are ad hoc is also crucial. This is because the employer, in the face of adverse experience (whether that adverse experience relates to his pension costs, as such, or to his business activities), can delay or avoid any adjustments for inflation - in which case his employees bear some or all of the consequences of poor investment performance. The risks of the uncertain future then end up being shared in one way or another between the employer, the plan members, and the pensioners. As a result, many defined benefit plans, in this important respect, may come somewhat closer in their actual outcomes to defined contribution plans than at first appears to be the case.

To obtain some measure of the costs associated with different types of plans under various economic and demographic assumptions, a simulation model was developed in conjunction with a firm of consulting actuaries and employee data obtained from a sample private sector employer. The model, the employee data used and the results derived from it are described in considerable detail in Appendix 4. Table III-16 portrays estimated employer costs for six types of plans that are typical of those found in today's employer-sponsored pension system.

It should be noted that all except the flat benefit plan require an employee contribution of 5% of wages or salaries, less whatever amount he is required to contribute to the C/QPP. After deduction for the C/QPP, employee contributions to all but the non-contributory flat benefit plans amount to around 4% of covered payroll costs. These employee costs are not included in the table.

The annual employer costs shown for the respective plans as a proportion of payroll costs are those that he incurs to cover the liabilities of his plan. These do not include the further cost of his contributions on behalf of employees to the C/QPP.

A word of explanation is necessary to indicate the nature of the benefits provided under the respective plans and their comparative costs. Under the money purchase plan, it is assumed that the employer and the employee each contribute 5% of the latter's wage or salary to the employer-sponsored plan, less the amount they are required to contribute to the C/QPP. The employer's annual cost for contributions to the money purchase plan amounts to 3.24% of covered payroll under this scheme.(19) The benefit to the employee depends on the investment experience during the years in which contributions are accumulating in the fund and the amount of the annuity that can be purchased at the time of his retirement.

Under the flat benefit plan, the employee benefit amounts to \$10 per month for each year of service. If he worked for 20 years, he would be entitled to a pension of \$200 a month. It is estimated under the model that the cost of this plan to the employer amounts to 1.01% of covered payroll.(20)

Under the career average plan, it is assumed that the pension benefit amounts to 2% of the average annual wage of the employee during the years he was a member of the plan, times his number of years of service. The employer's payroll cost is estimated at 2.05% annually. The last three columns show the estimated employer payroll costs of different benefit levels calculated on the basis of final average earnings over the last five years of service by an employee both on an indexed and an unindexed basis.

(19)The employer's cost averages less than the average employee cost because the employer recaptures his contributions in respect of employees who have terminated before vesting.

(20)The low current service cost of the flat benefit plan reflects the fact that it contains no contractual provision for the improvement of benefits. In practice, of course, benefits are improved periodically. See Appendix 4, Table 11. This means that employers also bear the further cost of amortizing the unfunded liability.

Table III-16

Estimated Annual Employer Costs for Current Service of
Six Different Types of Pension Plans as a % of Covered Payroll

Plan Benefits	5% Money Purchase	\$10 Per Month Flat Benefit	2% Career Average (unindexed)	1 1/2% Final Average	2% Final Average	2% Final Average <u>indexed</u>
% payroll costs	3.24	1.01	2.05	2.08	3.96	6.0

The estimated costs were computed using the following economic assumptions:(21)

Annual Rate of:

Return on pension fund assets	6.5%
Increase in average wages/salaries	5.0%
Increase in prices	3.0%

The implications of these assumptions are that real wages and salaries will grow at 2% per year and that the rate of return on a mixed portfolio of stocks, bonds and mortgages will be some 3 1/2% after adjustment for inflation.

The estimated costs in Table III-16 are lower than the costs commonly associated with many employer-sponsored plans. In this connection, it will be recalled that earlier in this chapter it was indicated that employer costs tend to average in the range of 5-7% of payroll. The following are among the more important reasons for the differences:

- the pension plans portrayed in Table III-16 are basic in nature and provide for none of the additional benefits included in many actual plans. For example, including a post-retirement survivorship provision and establishing a normal pensionable age of 60 - that is, the minimum age at which an individual may retire with an unreduced pension - increase the employer's cost for the unindexed 2% final average plan from just under 4% of payroll to 6.5% of payroll;
- the demographic assumptions of the plan - such as termination of employment rates (which affect the extent to which employees accumulate vested pension rights), retirement rates, plan entry rates - utilized by the model are 'realistic'; they reflect the actual recent experience of a large employer. Many actuaries, however, use more 'conservative' demographic assumptions when computing estimated annual employer costs, which would tend to increase estimated employer costs;(22) and

(21)These are the model assumptions from '1990 on'. Other assumptions apply to the 1978-1989 period. See Appendix 4.

(22)For instance, they assume lower rates of employee termination than warranted by actual experience.

- the method used to produce the above cost estimates involves a closed workforce but makes some provision for the addition of new members to the plan. Consequently, it has a small tendency of the type exhibited by open group actuarial techniques to lower costs. However, this is offset by the use of an actuarial funding method which tends to produce current service costs higher than other commonly used actuarial methods.

It should also be noted that the above data are for current service costs only. They do not include a provision for the amortization of unfunded liabilities. (Surveys suggest that unfunded liabilities per member in the early and mid-1970s were of the order of 30%.)⁽²³⁾

Table III-17 indicates the effect on estimated employer costs when different economic assumptions are adopted. It thus indirectly shows the impact on employer costs if long-term economic events depart from the actuary's original expectations about the future. In this sense, the table illustrates the extent of cost uncertainty faced by employers offering defined benefit plans.⁽²⁴⁾

Table III-17

Estimated Effect on Employer Pension Costs for Current Service
of Variations in Economic Assumptions as a % of Covered Payroll

	"Benchmark" Plans (Not Indexed)					Indexed
	5% Money Purchase	\$10.00 Flat Benefit	2% Career Ave.	1 1/2% Final Ave.	2% Final Ave.	2% Final Ave.
	(%)					
Initial assumptions	3.24	1.01	2.05	2.08	3.96	6.01
Return on assets lower by 1 percentage point	3.24	1.15	2.90	2.95	5.33	8.15
(% change over line 1)	(0)	(14)	(41)	(42)	(35)	(36)
Wage increases lower by 1 percentage point	3.22	1.09	1.97	1.67	3.39	5.30
(% change over line 1)	(-1)	(8)	(-4)	(-20)	(-14)	(-12)
Wage and price increases and return on assets higher by 1 percentage point	3.26	0.84	1.46	1.67	3.41	5.89
(% change over line 1)	(1)	(-17)	(-29)	(-20)	(-14)	(-2)
Wage and price increases higher by 1 percentage point and return on assets lower by 1 percentage point	3.26	1.09	3.11	3.40	6.20	10.58
(% change over line 1)	(1)	(8)	(52)	(63)	(57)	(76)

⁽²³⁾See the earlier section in this chapter on Financing of Pension Plans.

⁽²⁴⁾See Appendix 4 for details of these calculations.

The most striking conclusion to be drawn from the table is the large difference in costs of defined benefit plans that result from a lower rate of return on assets than originally expected. Line 2 shows increases in costs of between 35 and 42% for career average and final average pension plans when the rate of return assumption is reduced by one percentage point. (As to be expected, none of the changes in assumptions has a significant effect on the employer cost of money purchase plans.) Line 3 shows that when wages are assumed to rise less rapidly, the costs of pension plans fall in the case of those plans where the size of the pension depends upon wage levels. The fall in costs in Line 3 is smaller than the increase in costs shown in Line 2, partly because the rate of return assumption has an impact on plan costs during both the pre-retirement and post-retirement periods, while the assumption regarding wages has an impact during the pre-retirement period only.

Line 4 shows the effect of increasing each of the economic assumptions by one percentage point. Under these assumptions, there is almost no change in the cost of the indexed final average plan. Employer costs for the unindexed, defined benefit plans, on the other hand, are significantly lower; the downward effect on costs of the higher rate of return assumption more than offsets the upward effect of the higher wage increase assumption.

Line 5 shows the very substantial effect on plan costs associated with wage and price assumptions that are higher and a rate of return assumption that is lower than those in the initial case.

Similar tests were carried out to determine the impact on employer costs of changes in the average age, service, earnings composition, retirement rates, termination rates and entry rates of the employee group. The impact of plausible changes in these demographic factors was significantly smaller than the impact of changes in the economic assumptions outlined above, with one noticeable exception. A group having a lower average age and higher termination rates would produce a significantly different pattern of costs. Under one such calculation, the employer cost for the 2% final average plan decreased by 67% from 3.96% to approximately 1.3% of covered payroll. In other words, the simulations show that although there are cost uncertainties for the employer associated with demographic assumptions, they tend to be significantly less than the cost uncertainties associated with economic assumptions. Accordingly, where the employer is successful in shifting the risks of an uncertain economic future onto the employee or pensioner, the remaining risks associated with demographic factors are unlikely to create major difficulties for the employer. Conversely, where the employer accepts much of the economic risk, long-term cost uncertainties can be substantial. A fully indexed pension plan involves such uncertainties for the employer.

Even if the economic assumptions prove to be accurate over the very long term, they may very well be wide of the mark in any given year. Recall that in Line 3 of Table III-17, it was assumed that investment return differed by only one percentage point from original assumptions. Yet substantial effects on long-term costs were seen. In the real world, year-to-year changes in investment return, or other economic variables, can be much greater than shown in that table. Where actual

experience differs from actuarial assumptions, but the actuary judges that the long-term experience will average out as originally assumed, he will not change his actuarial assumptions. But if the current experience leads to deficits, the law requires that they be amortized. In seeking to protect plan members and pensioners, the law cannot accept the expectation that all will work out smoothly in the long run. If the deficits continue for several years, the effect of the extra payments required by law can be to increase employer costs by substantial amounts. Increases of 50% in employer costs, or even greater, could easily arise in a period of accelerating inflation - particularly if the plan is indexed. Of course, when inflation decelerates, the opposite effect will tend to occur. But the volatility of costs can itself constitute a problem. Additional details on the matter of volatility are set out in Appendix 4. It is shown there that, in general, cost volatility is greater in fully or partly indexed plans than it is in unindexed plans.

8. The Regulation of Employer-Sponsored Pension Plans. Employer-sponsored pension plans are generally subject to two principal kinds of regulation in Canada.

For pension plans registered with Revenue Canada, employer and employee contributions to pension funds are deductible for income tax purposes up to ceilings specified in the Income Tax Act. The earnings of the funds are also free of income tax. Once they are paid out, pension benefits have to be taken into income for tax purposes.

In order for a pension plan to qualify for registration, the administrative rules of Revenue Canada require that the employer contribute to it. They also specify, among other things: the age of entitlement to benefits (normally age 60 to 70), the form in which the pension is to be taken (normally a life annuity), the institutions through which plans must be funded (insurance companies, pension trusts, corporate pension societies, governments and their agents), the circumstances under which past service may be covered, and the maximum benefit that may be paid (the initial maximum amount is the product of 2% per year of pensionable service up to 35 years (i.e. 70%) and the average of the best three consecutive years of remuneration, but in any event a maximum of \$60,000). These and other conditions are set out in an Information Circular with little explicit statutory guidance from the Income Tax Act.

Pension benefits legislation is the second important type of regulation referred to above. Seven pension benefits statutes have been enacted since the mid-1960s by six provinces (Alberta, Saskatchewan, Manitoba, Ontario, Quebec and Nova Scotia) and by the federal government (in respect of employment subject to federal jurisdiction, such as that in banking and all employment in the Territories). Among other things, these statutes establish vesting provisions, investment and disclosure rules, and funding requirements. Revenue Canada requires that in provinces where pension benefits legislation exists, a pension plan must be registered with the supervisory authorities in that jurisdiction before it can also be registered with Revenue Canada for tax purposes.

Under federal and provincial pension benefits legislation, employer-sponsored plans must provide for the vesting of benefits after an employee has provided at least 10 years of service and reached the age of 45, what is known as the '45 and 10' standard.(25) The same combination of age and service also applies to the so-called lock-in provisions applying to an employee leaving a contributory plan. The employee cannot withdraw his own contributions, but instead must accept a deferred pension benefit.

The pension benefits statutes also govern investment by pension funds. The regulations tend to be modelled on, or refer to, the Canadian and British Insurance Companies Act or the Quebec Insurance Act in the case of Quebec. In general, up to 7% of the book value of the fund may be held in real estate and leaseholds, of which not more than 2% may be non-income bearing. An additional 7% may be held in forms not specifically prescribed.(26) Unlike the restrictions placed on the insurance industry, however, there is effectively no limit on the proportion of the fund that may be invested in common stocks (but no more than 10% of the book value of a pension fund may be invested in any one corporation, partnership, association or person). Pension funds are discouraged by a tax penalty from investing more than 10% of their assets outside of Canada.

Under the legislation, actuarial reports are called for at regular intervals, and conditions are prescribed for dealing with any deficiencies revealed. In Ontario, for example, the initial unfunded liabilities (on a going concern basis) that existed at the beginning of 1965, when the legislation came into force, had to be funded by 1990, as did any new plans or amendments to existing plans introduced between 1965 and 1975. For new plans or amendments to existing plans after 1975, the law required the initial unfunded liability to be funded within 15 years. Deficiencies due to adverse experiences of various types had ordinarily to be funded over periods not exceeding five years. In Ontario, adjustments to terminated or retired members' pensions in line with wage or price indices may be excluded when determining funding requirements. Given the life expectancy of those involved, the payment of such incremental benefits from the employers' current revenues apparently seemed to the Ontario authorities more appropriate than amortization over a time period which might well exceed the average lifespan of the recipients.

The amortization requirements developed elsewhere have generally followed closely the model established by Ontario in 1965. The system apparently found broad acceptance and there was little, if any, pressure to relax the requirements until the mid-1970s, when, as noted earlier, final and best average pay plans began to develop substantial experience

(25)Under the Manitoba legislation, however, vesting is required of all plans after ten years of service regardless of age. Mandatory 'locking-in' of employee contributions occurs at age 45 and 10 years of service.

(26)In Ontario, this 'basket clause' provision was recently raised to 10%.

deficiencies. These deficiencies were attributable largely to rapid unanticipated increases in liabilities resulting from higher salaries which were not offset by parallel increases in asset values. The impact of these deficiencies was felt all the more sharply because of the concurrent adjustments to pensions-in-pay to help offset pensioners' rising living costs, as well as other benefit improvements.

After extended discussion among the members of the Canadian Association of Pension Supervisory Authorities (CAPSA), Ontario, Quebec and the federal government amended their regulations in early 1977 to allow for the liquidation of experience deficiencies over 15 years (on a going concern basis), subject to certain tests. These tests were based essentially on the need of employers to meet those liabilities that would be payable if their plans were terminated (wind-up basis).

For plans that have members in several jurisdictions, there are intergovernmental agreements which provide that the supervisory authority in the jurisdiction with the most members acts as agent for the other jurisdictions. For instance, if a plan has 200 members in Alberta and 100 each in Saskatchewan and Manitoba, the employer would report to the Alberta authorities in relation to all 400 members. The Alberta authorities would attempt to ensure, in respect of the members in Saskatchewan and Manitoba, that the standards established in the statutes of those latter two provinces were adhered to in respect of the members working in them.

Under the sponsorship of CAPSA, the supervisory authorities meet regularly to attempt, among other things, to maintain uniformity in legislation between the jurisdictions.

Until recently, variations in the federal and provincial pension statutes and their accompanying regulations have been, for the most part, only of a technical nature. But substantial differences now exist between the Manitoba statute and the statutes of the other jurisdictions relating both to vesting⁽²⁷⁾ and to disclosure requirements. If such differences in requirements become more commonplace, the obstacles to successfully implementing the intergovernmental agreements will grow. In the absence of such agreements, employers with plan members in more than one jurisdiction would also face increased administrative inconvenience and cost.

While reference has been made to the two main federal and provincial regulatory systems which exist in Canada, there are others. Many public sector plans are governed by their own separate legislation, rather than by pension benefits standards legislation. Federal and provincial human rights legislation is also being extended in its application to employee benefit plans. For instance, the new Canadian Human Rights Act prohibits discrimination of various types, with age, sex, marital status and physical handicap being the most relevant to pension plans under federal jurisdiction.

(27)See footnote 25.

9. Summary. In the face of an uncertain future, the relative risk borne by employers and employees varies greatly between different types of pension plans. The gamut extends all the way from defined contribution plans, in which the entire risk is borne by the employee, to fully indexed defined benefit plans, in which all the risk is borne by the employer.

About 62% of full-time paid employees between the ages of 25 and 64 are members of pension plans. Of those in this grouping, a higher proportion of men than of women are members. Also, virtually all in this grouping who work in the public sector are plan members. In the private sector, about one-half of such employees are in pension plans.

Pensions paid by employer-sponsored plans have increased dramatically over the past 20 years, even though they still account for a relatively small proportion of retirement income. Much of this increase is due to the 'start up' phenomenon. The rate of increase in such payments can therefore be expected to decline in the future.

Private sector employers that do not offer any plan are typically smaller employers in the service and trade sectors. Their operations are labour intensive and in many cases not unionized, their business activities are in highly competitive markets, and they have limited financial resources. These employers are likely to wish to avoid the administrative cost and inconvenience associated with pension plans; and their employees are likely to be young and mobile and, therefore, relatively uninterested in participating in such plans. Moreover, the negligible value of the tax deductibility of employee contributions and the high benefit offset rates associated with GIS and provincial top-up programs may well make it disadvantageous for low-income workers to contribute to employer-sponsored plans.

In addition to the gaps in pension coverage, other factors affecting the amount of pension individual plan members accumulate include vesting and portability provisions. While there have been important improvements in vesting provisions in recent years, it remains the case that minimum vesting standards in Canada are among the weakest in the industrialized world. Consequently, with current rates of labour mobility, it is predictable that many of those covered by plans for substantial periods of their working lives will end up with little or no private pension income. In this regard, women fare particularly badly.

Private sector employers that do offer plans are frequently reluctant to accept the risks associated with indexed, defined benefit plans. Therefore, they offer either defined contribution plans, or defined benefit plans in which the real value of some or all of the plan terms are not maintained automatically. This reduces or eliminates the risks associated with inflation (although employers offering defined benefit plans will continue to bear certain other lesser risks such as those resulting from changes in longevity). The terms of private sector defined benefit plans, under which real values are not preserved automatically, are frequently improved on an ad hoc basis if and when the

employer considers he is able to do so. In most cases, the adjustments have not prevented the value of pensions-in-pay from falling in real terms and in many cases the erosion in real values has been substantial.

Pension plans in the public sector typically involve contributory defined benefit plans with richer basic benefit provisions, together with higher long-term employer costs and higher employee contributions than plans in the private sector (which, however, are frequently non-contributory). Adjustment for inflation is, on average, more complete in both the pre- and post-retirement periods in the public sector than in the private sector.

Employer pension costs vary widely; one study suggests that, in the last five years, they have averaged between 5 and 7% of payroll, having risen significantly since the late 1960s. The cost increases are partly due to a growth in unfunded liabilities, associated in substantial measure with rising wage and salary levels in final and best average plans and retroactive improvements in flat benefit plans. These unfunded liabilities have to be amortized over periods varying from three to 15 years. Solvency requirements appear to be quite stringent and, in general, the recent record shows beneficiaries to have been reasonably well protected in situations where plans have been terminated.

C. Registered Retirement Savings Plans

Table II-3 underlined the important role that investment income and, hence, private saving plays in the retirement income system.

Saving through Registered Retirement Savings Plans (RRSPs), which were introduced in 1957, has become very popular in recent years. However, it is not clear to what extent the existence of this vehicle may have increased personal saving beyond what it would have been in the absence of the tax assistance, and to what extent RRSPs have simply attracted funds that would have been saved in other forms. In any event, the assets of these plans at the end of 1976 were estimated to be roughly of the order of \$7.5 billion, equivalent to perhaps 5% of the net financial assets of persons and unincorporated businesses. Annuities arising from RRSPs do not yet play a significant role in the income of the current elderly.(28)

RRSPs are usually established by individuals. The funds themselves are generally pooled, although some are self-administered. A trend has developed in recent years whereby employers facilitate group

(28)The Registered Home Ownership Savings Plan (RHOSP) is a related vehicle. Taxpayers who do not already own a home of their own may deduct from taxable income contributions to an RHOSP up to specified limits. The contributions and accumulated income may be withdrawn tax-free if used to purchase an owner-occupied home. RHOSP funds held by members of the Trust Companies Association of Canada at the end of 1976 aggregated \$245 million. Funds associated with DPSPs and EPSPs accounted for another \$166 million and \$144 million respectively (see footnote 7 of this chapter).

RRSP arrangements through payroll deductions.(29) Some of the RRSP funds originate from employees who, upon leaving a pension plan, 'roll over' their return of contributions or annuity payments into an RRSP, rather than take them into income for tax purposes.

Participants in RRSPs can deduct their contributions from taxable income each year within certain limits, currently the lesser of 20% of earned income or \$5,500. If an employee is a member of a Registered Pension Plan, the combined limit on his contributions to the pension plan and an RRSP is \$3,500, or 20% of earned income. Earnings on RRSP assets are accumulated free of tax and, as is the case with RPPs, the tax benefits from the dividend credit and the special treatment of capital gains are forgone. Annuity payments or other withdrawals from an RRSP are subject to income tax.

When an individual leaves his employer and receives a pension, a retiring allowance (a single payment in recognition of long service), and/or a return of pension contributions, he may transfer these amounts to an RRSP without paying any income tax and without regard to the limits outlined above, provided he is not over 71 years of age. Similarly, a person receiving pension income may roll over this income into an RRSP without paying income tax and without regard to the above limits on annual contributions.

Until recently, funds in an RRSP could be withdrawn only in the form of a life annuity beginning before age 71, or in a lump sum. In 1978, the options open to owners of RRSPs - after reaching age 60 - were broadened to include either the purchase of a fixed term annuity to age 90, or the transfer of RRSP assets into a Registered Retirement Income Fund (RRIF). In the latter case, specific fractions of the assets in the fund must be withdrawn each year by the holder to provide annual income to age 90, the net effect being to index the payments to the yield earned by the fund.

(29)Employer contributions to RRSPs, however, are not tax-deductible.

D. Sources of Retirement Saving
and their Uses in the Economy(30)

Up to this point, the chapter has described the principal vehicles making up the retirement income system. This section describes the role that retirement savings play in the economy. Table III-18 shows the amount of saving through the system as a proportion of total saving in the economy.

(30) This note describes briefly the source of data used in Tables III-18 to III-23 in respect of retirement income vehicles. Figures for the C/QPP were derived from their reports and from reports of the Caisse de Dépôt et Placement du Québec. Trusteed pension plan data were derived from Statistics Canada publication Trusteed Pension Plans Financial Statistics. Figures for federal government superannuation accounts were based on the Public Accounts of Canada adjusted to a calendar year-end basis, and figures for Canadian Government Annuities were derived from the same source; figures for those provincial superannuation accounts also handled on the so-called consolidated revenue fund basis were derived using National Accounts data. Further details are provided in footnotes 4 and 5 to Table III-19. Figures for employer-sponsored pension plans funded by life insurance companies were derived from the Statistics Canada report already cited and from annual reports of the Superintendent of Insurance. Figures for RRSPs were estimated by the Task Force on the basis of an examination of a large amount of fragmentary data from a variety of sources; in this regard particular help was provided by members of the life insurance industry and by the Trust Companies Association of Canada.

Table III-18

Sources of Saving, Canada
1972-1976

	\$ Billion	% of Gross Saving
Retirement Saving Identifiable as Such		
C/QPP	8.8	5.0
Employer-sponsored pension plans	26.0	14.7
RRSPs	5.9	3.3
Sub-total	40.7	23.0
Other Saving		
Persons & unincor- porated business	26.4	15.0
Government(1)	-6.4	-3.6
Corporate and government business enterprises	24.0	13.6
Net saving	84.7	48.0
Capital Consumption Allowances and miscellaneous valuation adjustments (all sectors)	78.7	44.6
Deficit on current transactions with non-residents	13.0	7.3
Residual error	0.1	0.1
Gross saving	176.5	100.0

(1)As published by Statistics Canada, the National Accounts show cumulative saving in the government sector for this period of \$12.9 billion. For purposes of this study, the total has been adjusted downward to take account of the estimated accrual of liabilities in respect of public service non-trusteed pension plans of \$10.5 billion and of liabilities in respect of the C/QPP of \$8.8 billion.

This table indicates that saving for retirement purposes was equivalent to 23% of gross saving (48% of net saving) in the 1972-1976 period. The comparable figure for the 1960s was substantially lower - around 15% of gross saving.

Table III-19 illustrates the asset distribution of claims of public and private retirement income vehicles.

Table III-19

Estimated Amount and Distribution of Claims of Retirement
Income Vehicles, End of 1976

Type of Plan(1) and Total Assets	Claims on Gov'ts	Corporate			Mortgages(2)	Other(3)
		Bonds	Equities	(% distribution)		
Canada Pension Plan \$10.9 billion	100	0	0		0	0
Quebec Pension Plan \$4.0 billion	62	10	15		5	8
Public employer plans(4) \$35.7 billion	81(5)	5	5		6	4
Private employer plans \$18.9 billion	15(6)	21	27		25	13
RRSPs \$7.5 billion	10	10	15		59	6
All plans \$77.1 billion	59	9	11		15	6

- (1) Sponsorship of plans which make use of insurance contracts and Canadian Government Annuities is unknown; 80% of the claims of these plans have been arbitrarily allocated to the private sector and the remaining 20% to plans in the public sector.
- (2) Includes investment certificates, term deposits, etc. which are used largely to finance the acquisition of mortgages.
- (3) Includes cash, money market paper, real estate, and foreign securities.
- (4) Includes public employer pension plans of the so-called consolidated revenue fund type, where no provision for plan liabilities exists outside the accounts of the specific government, described in Section 4 of this chapter, Financing of Pension Plans. Under the treatment described in footnote 5 below, the figures include unfunded liabilities, imparting an upward bias to the importance of public employer plans in comparisons of size. Given widely varying accounting practices, efforts to produce comprehensive data more comparable to those for private employer plans have not been fruitful. In effect, the figures used in respect of public employer plans include in their total the applicable amounts of the guarantees, explicit or implicit, by the sponsoring governments.
- (5) Of this amount, three-fifths represents various non-negotiable government liabilities other than bonds. Such debt in the case of federal government employee pension plans is the amount of liabilities as estimated actuarially and recorded in the Public Accounts of Canada; the estimate for liabilities of the Supplementary Retirement Benefits Act is confined to the amount of contributions accumulated in that Account. The estimates are consistent with those in the Public Accounts for 1976-1977 and reflect the statutory actuarial report as of March 31, 1972, not the Tomenson-Alexander report. Since not all other public sector employers record liabilities on the same basis, the provincial total has been projected on the basis that, insofar as pension funds handled through consolidated revenue funds are concerned, the proportion of total provincial pension liabilities to federal pension liabilities is the same as the proportion of total provincial pension payments to total federal pension payments.
- (6) More than one-fifth consists of Canadian Government Annuities.

The CPP fund is invested almost entirely in non-negotiable provincial securities with an original term to maturity of 20 years and an interest rate linked to the interest rate on federal bonds with a term to maturity of 20 years or more. The QPP fund is managed by the Caisse de Dépôt et Placement du Québec and invested on a much broader basis than the CPP. Its assets are largely purchased in the open market. Nearly one-third are in the form of corporate bonds, stocks and mortgages, with the balance consisting mostly of negotiable Quebec provincial and municipal bonds.

Almost two-thirds of the total claims held by employer-sponsored pension plans have been generated by employer-sponsored plans in the public sector. Over 80% of the claims of these plans have been used to finance the public sector. On the other hand, only 15% of the assets of private sector plans were invested in the public sector. Those governments - such as the Ontario and federal governments - which have not established separate pension fund portfolios in respect of the plans for their own employees are automatic recipients of the financing generated by those plans. Other employers in the public sector, such as Manitoba, place all their pension fund assets in the hands of a trustee under arrangements similar to those found in the private sector. Despite appearances, however, the reality is that the investment policy of some trustee plans in the public sector is often formally or informally constrained; government bonds represent well over half their assets, while the corresponding figure for private sector plans is only about 12%.

Table III-20 shows the relative size of the different types of retirement income vehicles, the distribution of their assets or claims as between the public and private sectors, and the relative growth rates.

Table III-20

Distribution and Growth of Claims of
Retirement Income System by Type of Plan, 1967-1976

Type of Plan	Distribution in 1976	Compound Growth	
		Rate 1967-1976	
		(%)	
C/QPP	19.4		35.7
Public sector employer	46.3		12.9
Private sector employer	24.6		10.6
RRSPs	9.7		30.1
Total	100.0	Average	15.2

The first column of Table III-20 indicates that almost two-thirds of the financing associated with these retirement arrangements at the end of 1976 had been generated in the public sector through the C/QPP and public sector employer plans.

As shown in the second column, the two classes of plans with the most rapid compound growth rates in the 1967-1976 period were the two newest - the C/QPP (introduced in 1966) and RRSPs (introduced in 1957). In both cases, however, the rapid growth has been from a relatively modest base and, in the case of the C/QPP, the rate of growth in future will decline rapidly in the absence of increases in contribution rates. The table also shows that the claims associated with public employer plans have been growing more quickly than those of private employer plans, although part of the difference is accounted for by differences in measurement techniques noted earlier.

Table III-21

Distribution and Growth of Claims of Retirement
Income System by Type of Claim, 1967-1976

Type of Claim Held by all Plans	Distribution 1976	Compound Growth Rate 1967-1976
		(%)
Public Sector		
Federal bonds	1.6	7.4
Provincial bonds	25.8	20.4
Other claims on federal and provincial governments	29.9	11.5
Municipal bonds	<u>1.8</u>	5.0
Public sector share	59.1	Average 14.0
Private Sector		
Corporate bonds	8.7	13.8
Mortgages	10.9	14.1
Guaranteed funds	4.0	47.3
Equities	11.3	20.7
Miscellaneous	<u>6.0</u>	17.0
Private sector share	40.9	Average 17.2
Combined Share	100.0	Average 15.2

The first column of Table III-21 shows that almost 60% of the total flow of savings generated by the various retirement income arrangements in the public and private sectors were used to finance the public sector. Some of this financing was provided through the market, as when trustee pension plans purchased government securities. However, most of it was essentially captive to the public sector, as in the case of CPP funds made available to the provinces and the funds made available to the federal government through its employee pension plans. The compound growth rates shown in the second column indicate that, over the 1967-1976 period, investments in private sector assets grew slightly faster than those in public sector assets. The rapid growth in guaranteed funds in the private sector is largely associated with the growth of RRSPs.

The following two tables utilize the same data to illustrate the importance of retirement income funds in the financing of various kinds of economic activities.

Table III-22

Importance of C/QPP, Employer Plans, and RRSPs
in the Financing of the Public Sector, 1967-1976 Inclusive

	Estimated Increase in Liabilities 1967-1976 (Consolidated) \$ billion	Proportion Financed by Pension-Type Savings %
Federal government and enterprises(1)	40.0	28.4
Provincial government and enterprises(2)	47.4	45.1
Municipal government	<u>11.3</u>	4.8
Total public sector	98.7	Average 33.7

(1)Excluding Bank of Canada.

(2)Adjusted roughly to reflect pension liabilities on a full accounting basis. Includes hospitals.

Table III-23

Importance of C/QPP, Employer Plans and RRSPs in Financing
Mortgages, Funded Debt, and Equities
Issued by the Private Sector, 1967-1976 Inclusive

	Gross Increase in Selected Liabilities 1967-1976 \$ billion	Proportion Financed by Pension-Type Savings %
Mortgages	56.3	16.3
Bonds and debentures	17.0	28.5
Equities	<u>37.8</u>	19.5(1)
Total	111.1	Average 19.3

(1)The figures for equities are estimates that reflect special statistical difficulties of valuation and classification.

Table III-22 indicates that one-third of the growth in liabilities of the public sector in the 1967 to 1976 period was financed by pension-type saving of one kind or another. The importance of such saving to the provincial sector is largely a function of the role of the C/QPP in provincial finance. While the data in Table III-22 and Table III-23 are not strictly comparable, they do further illustrate that pension-type saving is much more important in financing of the public sector than the private sector.

In summary, the amount of saving through retirement income vehicles has been important. During the decade ending in 1976, it financed over a third of the net increase in liabilities of the public sector, and absorbed perhaps a fifth of net new mortgages and net new corporate bonds, debentures and equities. The investment strategies vary significantly by type of vehicle. By statute, the CPP invests overwhelmingly in non-market provincial government securities. The QPP investment is in a portfolio of marketable securities. Public employer-sponsored pension plans hold large claims on the plan sponsors, and a relatively small proportion of their assets takes the form of private sector investments. The investments of private employer-sponsored plans are, in general, widely diversified. RRSP investments are widely diversified but tend to be invested most heavily in mortgages.

E. Retirement Age and Age of Entitlement to Benefits

1. Labour Force Participation by the Elderly. The Labour Force Survey is the only source of regular information on labour force participation and, indirectly, on retirement patterns. In considering these statistics, however, it must be recognized that non-participation in the labour force is not necessarily the same as retirement.(31)

Table III-24 shows that labour force participation rates are high for young people and low for those who are more elderly.

Table III-24

Labour Force Participation Rates by Age and Sex, 1978

Age	Male	Female (%)	Total
25-34	96	59	77
35-44	96	58	77
45-54	93	51	72
55-64	77	32	54
65-69	24	8	15
70 and over	10	3	6

Source: The Labour Force, Statistics Canada.

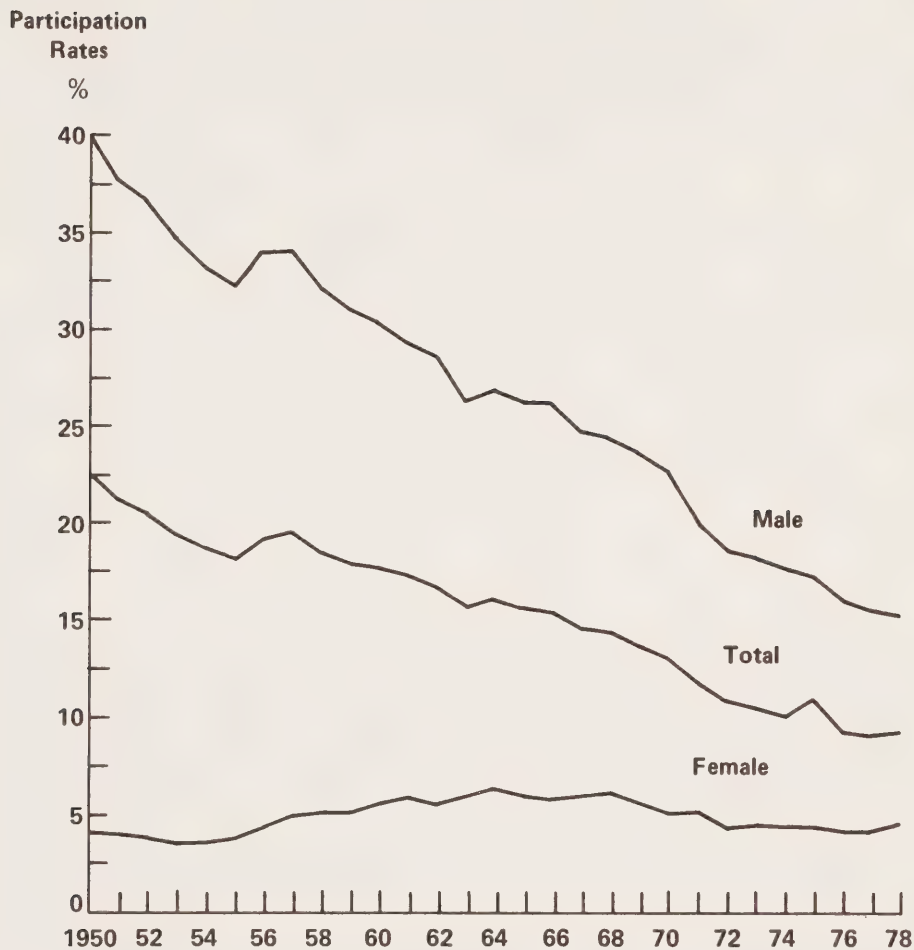
(31)Non-participation in the labour force refers to the status of a person during the week of the Labour Force Survey and applies to those who are neither working nor actively seeking employment. Since non-participation is only temporary for many people, in the short term this rate does not provide a measure of those who have permanently withdrawn from the labour force. The figures do, however, provide a guide to the proportion of the elderly who have retired.

The change in participation rates since the early 1950s for people 65 to 69 years of age is shown in Figure III-9. Since the definitions used in the Labour Force Survey have been changed a number of times over the years, the graph is only an indication of general trends. However, it shows important reductions in participation rates for males in that age grouping. For females, there is no clear trend.

The graph shows that since the early 1950s there has been a general decline in male participation rates. This decline may have been aided by the expansion of the public pension system through the years, including the introduction of C/QPP and GIS in the mid-1960s, and the lowering of the age of entitlement to public pension benefits from 70 to 65 between 1966 and 1970. However, the graph does not give clear evidence that lower ages of entitlement have an immediate and independent impact on retirement decisions - though they may well do so with a lag.

FIGURE III-9

Labour Force Aged 65-69 as Proportion
of Population Aged 65-69
(Participation Rates), by Sex, 1950-1978(1)



(1) For the period 1956 to 1965, the 1965 definition of labour force participation was used. For the period 1966 to 1975, the 1971 definition was used. In 1976 another new definition of participation was used.

Source: The Labour Force, Statistics Canada.

2. Age of, and Reasons for, Retirement. A further perspective on when Canadians retire and why is provided by a special survey conducted by Statistics Canada on behalf of the Department of National Health and Welfare in February 1975.(32) This survey provides the only recent data

(32) Retirement in Canada, Volume 1: When and Why People Retire; Staff Working Paper 7704, Policy Research and Strategic Planning, Health and Welfare Canada, May 1977, Ottawa.

relating to the age of retired males and the reasons for retirement; the results of the survey are summarized in Table III-25. Since comparable data for previous years are not available, it is not possible to measure retirement trends. The 'other reasons' classification shown in the table refers mainly to those who retired of their own volition.

Table III-25

Percentage of Retired Males by Age
and by Reason, February 1975

Age	% Retired	Compul- sory Retire- ment	Poor Health (%)	Being Laid Off	Other Reasons
55	9.1	0.3	5.8	1.3	1.7
57	8.5	0.2	5.5	1.2	1.6
59	12.6	0.2	8.5	1.3	3.8
61	16.5	0.3	11.0	1.4	3.8
63	24.7	0.4	14.5	2.2	7.6
65	57.7	17.4	22.1	4.0	14.2
67	78.1	23.8	29.7	5.4	19.2
69	86.1	25.2	32.9	5.9	22.1
71	93.0	28.3	33.7	6.1	24.9

It should be carefully noted that the figures in this table do not reflect the experience of the members of one particular age cohort, or group, moving through time. Rather, they provide a picture of the experience of the surviving members of successive cohorts at a point in time. Nonetheless, it would appear reasonable to conclude, on the basis of these data, that the age of retirement is heavily concentrated around age 65, with more than half of all retirements occurring between 63 and 67.

Based on the response of individuals to the questionnaire, it appears that many factors are involved in bringing about retirement - lack of employment opportunities, employer retirement rules, health, financial considerations (including entitlement to benefits from public programs), and a desire for leisure following years of work. The data in Table III-25 indicate that a majority of those retiring did so involuntarily. Of those who had retired by age 63, for example, 59% (14.5 as a percentage of 24.7) did so because of poor health, while only 31% had retired of their own volition (i.e. for 'other reasons'). Of those aged 69, only 26% had retired in the first instance at their own discretion. According to the survey, something under one-half of those compelled to retire for one reason or another indicated they were not satisfied with the timing of their withdrawal from the labour force.

3. Public Policy. Public policy influences the timing of retirement in several ways, the most important being through the rules governing eligibility for benefits from public retirement income programs and

through the rules by which governments regulate the retirement of their own employees. At this time, however, the way in which federal Human Rights legislation is being applied is having only slight impact on the age of retirement.

Eligibility for benefits from public retirement programs is no longer related to retirement status. The basic age of eligibility for benefits from OAS, GIS, and the C/QPP is 65. In the case of married couples where only one spouse is eligible for OAS and GIS, income-tested benefits are available to the other spouse at age 60 under the Spouse's Allowance Program. The provincial top-up programs for the aged also utilize 65 as the age of eligibility - with the exception of the British Columbia program, which provides benefits at age 60 on an income-tested basis.

Taxation rules applied to employer-sponsored pension plans also have an influence on retirement age. Revenue Canada's Information Circular No. 72-13R5, which sets out the administrative rules for registration of pension plans, states that the normal retirement age as defined in the pension plan should be in the 60 to 70 age range. Exceptions are permitted in special circumstances and subject to certain conditions. An employee who continues to be employed by the same employer after normal retirement age cannot receive his pension before age 65; alternatively, in the case stipulated, if the employee does not receive his pension, the pension benefits can be actuarially increased until his 71st birthday subject to the maximum pension rule. If, however, the employee is re-engaged by his former employer on a contract basis, the employee can also receive his pension. But if an individual who has reached the mandatory retirement age is required by his original employer to cease work and that individual subsequently is engaged by another employer, he can effectively obtain increased pension benefits at a later date by rolling over the pension payments from his first employer into an RRSP until he reaches 71.

The Canadian Human Rights Act prohibits discrimination in employment practices under federal jurisdiction on the basis of age. Authority in the Act to regulate maximum retirement ages for different types of employment has not yet been exercised. As a result, it is not discriminatory for an employer to retire an employee compulsorily who has reached the normal age of retirement for all persons in similar types of employment.

Regulations under the authority of the Public Service Superannuation Act (PSSA) prescribe 65 as the mandatory retirement age in the Public Service of Canada. Earlier retirement ages are fixed for members of the Canadian Armed Forces and of the RCMP. In all provinces, mandatory retirement for public service employees at age 65 is established either by legislation, regulation or practice. Extensions are possible in all jurisdictions, but usually not beyond age 70.

Most large private employers require employees to retire upon reaching a specified age, and many smaller employers probably do likewise. Such rules obviously play a significant role in determining when people withdraw from active participation in the labour force. Someone who is

compelled to retire can only continue to work beyond the specified age by switching to an employer who does not have such a requirement or by becoming self-employed.

4. Normal Pensionable Age. Data on the normal pensionable age in employer-sponsored pension plans are provided in Table III-26. Normal pensionable age is defined here as the earliest age at which a member can retire on the basis of age by right and immediately receive a pension as determined by the standard retirement benefit formula used in the plan.(33) Persons retiring before the normal pensionable age usually would be subject to reduced benefits.

Table III-26

Distribution of the Normal Pensionable Age(1)
by Plan and Plan Membership, 1976

Age	% of Plans		% of Plan Members	
	Male	Female	Male	Female
Under 60	1	1	1	
60 to 64(2)	7	17	11	20
65	91	81	81	66
Over 65	1	1	1	1
Other	<u>1</u>	<u>1</u>	<u>7</u>	<u>13</u>
Total	100	100	100	100

(1)This table does not reflect the special provisions which permit retirement on an unreduced pension before the normal pensionable age, as discussed below.

(2)The majority of these members are employed in the public sector, with a significant proportion accounted for by PSSA members.

Note: Numbers may not add to 100 due to rounding.

Source: Pension Plans in Canada, 1976; Statistics Canada.

As the table indicates, age 65 is the normal pensionable age for the bulk of the employer-sponsored pension system. In many plans, the normal pensionable age coincides with the age of mandatory retirement established by the employer. But a plan may have a normal pensionable age which differs from the age of mandatory retirement. Under the PSSA, for example, age 60 is the normal pensionable age but age 65 is the specified age for mandatory retirement.

5. Entitlement to Benefits before Normal Pensionable Age. In 1976, some 97% of all plans, which covered 95% of plan members, provided for participants who retired before the normal pensionable age stipulated in the plan to receive an immediate but reduced retirement benefit - that is, one that was lower than members would be entitled to receive on the

(33)This is the same as the definition of normal retirement age used by Statistics Canada in the biennial publication Pension Plans in Canada.

basis of years of service alone. Such a reduction reflects the longer period during which such pensions would usually be paid. Some of the plans reduce defined benefits on the basis of actuarial calculations, while others adopt an arbitrary early retirement discount factor. Usually such early retirement provisions apply only to those who have met certain age and/or service requirements.

More often than not, retirement before reaching pensionable age on a reduced pension requires the consent of the employer, although early retirement at the employee's option is not unusual. In some cases, however, an employer may reserve the right to require an employee to retire early - in which case the effect of these provisions is to provide the employer with a flexible mandatory retirement tool. Details on these aspects of early retirement provisions are summarized in Table III-27. The table shows the proportion of plans and plan members according to various types of early retirement provisions and the proportion having no such provision.

Table III-27

Early Retirement Provision by Plan and Plan Members, 1976

	% of Plans	% of Plan Members
Early retirement at:		
Employee's option	11	40(1)
Employer's option	6	5
Mutual consent	78	45
Other	2	5
No provision	3	5

(1) It is likely that a majority of these members are employed in the public sector.

Source: Pension Plans in Canada, 1976; Statistics Canada.

Some of these plans also permit retirement as of right before the normal pensionable age, with an immediate retirement benefit calculated using the unadjusted retirement benefit formula of the plan, provided that certain other age and service conditions are met. In the private sector, plans offering such provisions commonly require 10 to 35 years of service, combined with a minimum age requirement of between 60 and 62. In the public sector, 25 to 35 years of service, combined with a minimum age requirement of 55, is common. The PSSA requires 30 years of service and establishes a minimum retirement age of 55 for members to qualify for an unreduced pension. Some plans do not specify a minimum age, but permit retirement when service and age total some given figure (85 is common). Still others permit retirement on the basis of service alone (for example, 30 years of service in the automobile industry). While retirement by right under these sorts of provisions was permitted

in some 550 pension plans in 1976 - less than 4% of the total - these plans accounted for nearly 40% of all pension plan members in that year. More than 60% of the members of plans with such provisions were public sector employees.

F. Constitutional Setting

The development of the public and employer-sponsored elements of Canada's pension system is considered in this section in relation to the division of powers between the federal and provincial governments.

1. Public Pensions (OAS/GIS/SPA and C/QPP) and their Constitutional Setting. The enactment of the Old Age Security Act in 1952 and of the Canada and Quebec Pension Plans in 1966 are the two post-World War II watersheds in the development of Canada's public pension system. A constitutional amendment was associated with each.

Prior to the introduction of the Old Age Security Act, Sections 91 and 92 of the British North America (BNA) Act were regarded by constitutional experts as restricting the power of Parliament to enact legislation in respect of certain types of public pensions, but not in respect of others. 'Contributory' pension programs - that is, those financed in whole or in part by 'premiums' paid by or on behalf of the potential beneficiaries of the scheme - were generally regarded as being within the jurisdiction of provincial governments only. 'Non-contributory' public programs, those providing for payments from general public revenues unrelated to prior contributions, were regarded as being within the jurisdiction of both levels of government.

The Old Age Security Act provided for monthly payments to those aged 70 and over, subject to a residency requirement only. Since earmarked taxes were initially associated with the program, it was regarded as a contributory pension program for constitutional purposes (although applying that nomenclature to the arrangement implies a very broad meaning of the word contributory, since elderly persons who had never paid the taxes in question were nonetheless eligible for the pension). The way for this legislation was cleared by the addition to the BNA Act of a new section, 94A, conferring authority on the Parliament of Canada to make laws in relation to old age pensions.

The introduction of the Canada Pension Plan required a further constitutional amendment. That plan, a contributory plan both in the sense in which the word is used constitutionally and in the more generally understood sense, provided for the payment both of retirement benefits and, regardless of age, of survivor's and disability benefits. Section 94A, which referred only to old age pensions, was amended to include the payment of "supplementary benefits including survivor's and disability benefits irrespective of age".

The latter amendment to Section 94A followed several years of federal-provincial negotiations. One province, Quebec, indicated its desire to operate its own plan, whereas other provinces were willing to accept a national plan. The 1964 amendment to 94A allowed introduction

of the national plan, without interfering with the right of a province to operate its own plan.

In order to amend the CPP in a substantial way, the Act requires the agreement of two-thirds of the ten provinces containing two-thirds of the population. Thus, a high degree of consensus is required for amendment and Ontario effectively has a veto. This procedure for amending the CPP was the outcome of federal-provincial negotiations that preceded introduction of the Act, and Parliament's recognition of provincial responsibilities in this area. In 1977, for example, the provinces of Ontario and British Columbia decided not to concur in certain proposed changes to the CPP that would extend existing drop-out provisions in the case of contributors taking care of young children. (The QPP already has such a provision.) This controversy, quite apart from the merits of the case, underlines the fact that existing nationwide pension arrangements cannot be taken for granted: if irreconcilable differences were to emerge, provinces might develop their own plans which, in turn, would raise the question of the operation of the CPP in those provinces.

The CPP provisions require that no major change in the program may come into effect at least until the beginning of the third year following that in which Parliament was given notice of intent to introduce the proposed amendment, subject to the consent of the required majority of the provinces. The intent of the provision is to provide the provinces with sufficient time to make any changes in their own policies or programs that may be necessary as a result of the intended change in the operation of the CPP. In actual practice, the three-year delay has not always applied. In 1974 and 1975, the provinces concurred in the waiving of the three-year waiting period after majority support for particular amendments was received.

2. Employer-Sponsored Pensions and their Constitutional Setting. As already noted, employer-sponsored pension plans are, broadly speaking, subject to two principal kinds of regulation. Firstly, a degree of control is exerted over such plans by Revenue Canada through the administrative rules governing registration of pension plans for tax purposes. Secondly, vesting, solvency, investment, and disclosure requirements in respect of employer-sponsored plans in Canada have, since the mid-1960s, been regulated by pension benefits standards legislation enacted by six provincial governments, and by the federal government in the case of employment subject to federal jurisdiction.

Prior to 1965, employer-sponsored plans were regulated only through administrative guidelines under the Income Tax Act. In 1947, for example, the Department of National Revenue established a set of rules to be applied for registration of pension plans under the Income Tax Act. These included conformity with certain vesting and investment standards. Investment in the shares of the employer was forbidden initially, and later limited to 10% of the plan assets as is the case with regard to investments in any other company. With the subsequent proliferation of plans, a view developed that the federal government should not be using the Income Tax Act to affect the design, solvency and investment aspects of employer-sponsored pension plans, since most

such plans were constitutionally subject to provincial jurisdiction. Nonetheless, for plans in those provinces that do not have pension benefit legislation, Revenue Canada still requires, for tax registration purposes, that investment practices conform to the provisions set out in the federal Pension Benefits Standards Act.

G. A Recapitulation

The report to this point has described the principal features of the retirement income system and provided the background for a discussion of some of the major issues surrounding it. Table III-28 at the end of this chapter provides a summary of some of those features. Before proceeding to an evaluation of the system, it may be useful to recapitulate some of the main points that have emerged thus far.

1. Background. There is widespread public concern over many aspects of Canada's retirement income system. This concern is reflected in the various studies commissioned by governments and other institutions, and by the numerous organizations and individuals that have expressed serious misgivings about various features of the system.

The retirement income system in Canada is, in all important respects, a young one. Fifty years ago, the well-being of most elderly persons was determined by the size of any private savings and by the amount and nature of help provided by the family. Today, while the investment income of the elderly is substantial, and the role of the family remains important, governments and employers play more significant roles in the retirement income system.

Of the latter two institutions that have entered into the retirement income system - government and the employer - the first is by far the more important. Of the income of those aged 65 and over that can be readily accounted for, about 56% comes directly from governments, 21% from private savings, and just 12% from employer-sponsored pension plans. When account is taken of the fact that over one-half of those employer-sponsored pensions came from employers in the public sector, the role that government and its agencies play in the present retirement income system can be seen to be even larger than first appearances would suggest, and that of the private sector correspondingly smaller.

The average money income of elderly family units is less than 40% of the corresponding income of non-elderly family units. Even when the money incomes of the elderly are adjusted to take account of wealth generally - or just homeownership - and also family size, it appears that their relative economic position is, on average, still about one-fifth to one-third below that of the similarly calculated economic position of middle-aged families.

On average, unattached elderly individuals are worse off than elderly married couples; and among the unattached elderly individuals, women are generally worse off than men.

2. The Public Programs. The public part of Canada's retirement income system rests principally on three programs: OAS, which provides a flat rate pension to virtually all those aged 65 and over; the GIS, under which pension benefits are conditional upon the current income of the recipient; and the C/QPP, under which pension benefits are related to pre-retirement earnings. The Spouse's Allowance (SPA), provincial top-ups, and other income-tested programs for the elderly play important, but smaller roles.

The three principal programs were in place by 1967. Measuring their relative importance by the relationship between their benefit levels and average wages and salaries, it can be said that since 1967 the GIS has increased in importance, while the relative role played by the OAS has declined. In the case of the C/QPP, benefits increased in relative terms as the programs were phased in, but the rate of increase has been significantly less than it would have been if maximum pensionable earnings covered by the plans had kept pace with the rise in AWS. This situation will eventually correct itself, however, because of legislative amendments adopted in 1973 that were designed to raise gradually maximum pensionable earnings to the level of AWS.

3. The Employer-Sponsored Pension System. The employer-sponsored pension system currently produces around 12% of the reported income of those 65 and over. This relatively small proportion reflects the interaction of less than complete coverage of employer plans, less than full and immediate vesting, high rates of labour mobility (including involuntary changes in labour force status), gaps in survivorship provisions and the effect of inflation on employer-sponsored plans.

In the private sector, around one-half of the full-time paid workers between the ages of 25 and 64 are not members of an employer-sponsored pension plan. A much smaller proportion of female employees are covered than of males. The likelihood of substantial increases in coverage in the private sector appears to be small, barring changes in public policy.

Vesting and portability provisions in the employer-sponsored system adversely affect those who change jobs or employment status frequently. Consequently, many plan members end up with little or no private pension income. Once again, these aspects of the system injure women particularly seriously.

On average, public sector employers and employees contribute more to their pension plans than do their counterparts in the private sector. It is, therefore, not surprising that the pension benefits in the public sector are much larger than benefits in the private sector. Basic benefits are typically more generous in the public than in the private sector and vesting and survivorship provisions also tend to be better. The extent of the benefits provided by those employers in the private sector who do have pension plans also varies widely, with the larger employers generally providing the most extensive benefits.

Very few employer-sponsored plans in the private sector provide benefits that are automatically linked to the CPI, which in part reflects the risks to the employer that such arrangements entail. Contractual indexing is concentrated among public sector employer plans. Ad hoc adjustments are not uncommon in other plans, but in the majority of cases they are far from complete and limited mainly to larger employers.

Employer pension costs vary widely. A recent study suggests costs are generally between 3 and 12% of payroll, with the average somewhere in the range of 5 to 7% of payroll. In recent years, employer costs have risen. Apart from these cost increases, employers are also concerned about the uncertainty of costs in defined benefit plans, an uncertainty which rises the more fully indexed the plan.

At the end of 1976, the retirement income system had generated some \$77 billion of financing. Almost two-thirds of this originated from the public sector (from the C/QPP and public employer-sponsored plans) and nearly 60% of the \$77 billion went into the financing of the public sector.

The federal government exerts regulatory influence on all employer-sponsored plans through the Income Tax Act. Human Rights legislation, both federal and provincial, is also being extended in its application to employer-sponsored pension plans. Six provincial governments regulate employer-sponsored plans through pension benefits standards legislation and the federal government has similar pension benefits legislation covering employment under federal jurisdiction.

4. Retirement Age/Age of Entitlement to Benefits. Since 1966, the age of entitlement to public pensions has been reduced from 70 to 65. Employer-sponsored pension plans must establish a normal pensionable age for their plans. Age 65 is commonly chosen. This is often the same age at which retirement is mandatory. Some 40% of all plan members belong to plans which permit long-service employees to choose to retire before normal pensionable age on an actuarially unreduced pension. Most employer plans also make some provision for earlier retirement on actuarially reduced benefits. More often than not, however, access to such benefits requires the employer's consent.

5. The Constitutional Division of Powers. Since constitutional amendments were associated with the establishment of Canada's two most important public pension programs, it might be argued that the BNA Act constituted a potential barrier to the development of a nationwide public pension system. Yet the amendments were made, and within the last 30 years a nationwide public pension system has emerged. This achievement required both the federal government and the provinces to demonstrate a substantial degree of flexibility, particularly with respect to the arrangements governing the relationships between the CPP and the QPP.

On the employer-sponsored pension side, a fairly settled regulatory framework emerged between the mid-1960s and early 1970s as a result of interjurisdictional consultation. This followed a period of uncertainty as to which level of government would, or should, regulate various

aspects of employer-sponsored plans. Since then, a number of technical differences have emerged. As additional provinces enter this field, it may well be increasingly difficult to retain uniformity, which could create a problem for employers with plans covering employees in more than one jurisdiction.

The federal government can change pension policy directly through the OAS and GIS. Changing the CPP, however, requires provincial agreement, and maintaining parallelism between the CPP and QPP requires goodwill and flexibility on the part of all the governments concerned. Changes to the federal and provincial pension benefits standards legislation can obviously be made unilaterally but, in view of the advantages of the existing degree of uniformity among the seven statutes dealing with pension benefits standards, the overlapping jurisdictions, and the reciprocal delegation of powers, continued consultation between the provinces and the federal government is obviously desirable.

Table III-28

Principal Features of the Present Canadian Retirement Income System						
Level of Government Involvement	Source of Retirement Income	Type of Benefit and Program	Eligibility	Benefit Payments 1977	Financing	Tax Features
1. Government						
Federal	a) Old Age Security	flat rate pension, universal	univ., age 65, residence test	\$3.6 billion Single, \$1,747	pay-as-you-go general revenues	benefits taxable
	b) Guaranteed Income Supplement	variable pension, income-tested	OAS recipients who satisfy income test	\$1.1 billion Single max. OAS-GIS \$2,972	pay-as-you-go general revenues	benefits non-taxable
	c) Spouse's Allowance	variable pension, income-tested	spouse (60-64) of OAS pensioner who satisfies income test	\$110 million Couple max. OAS-GIS-SPA \$5,665	pay-as-you-go general revenues	benefits non-taxable
Provincial(1)	d) top-ups in six provinces	variable pension, income-tested	general OAS/GIS recipients who satisfy income test	\$200-250 million (estimate)	pay-as-you-go general revenues	benefits non-taxable
Federal & Quebec	e) Canada & Quebec Pension Plans	earnings-related pension up to earnings ceiling, social insurance	compulsory for employed and self-employed contributors (age 65 for retirement pension)	\$1.3 billion (estimated retirement and survivor's pensions paid to those 65 and over, \$790 million)	partially funded, payroll tax by employer/employees and self-employed	contributions are deductible, benefits are taxable

Table III-28 (cont'd)

Level of Government Involvement	Source of Retirement Income	Type of Benefit and Program	Eligibility	Benefit Payments 1977	Financing	Tax Features
	ii) defined contributions	money purchase, private	generally compulsory		benefits paid for annually as they are accrued	
	3) Individual and Group Saving					
Federal Provincial	a) tax-assisted (RRSPs, DPSPs)	annuities, voluntary	must have employment income		there are many places where private savings may be invested (e.g. life insurance and trust companies)	contributions deductible to certain limits; benefits taxable(2)
	b) non-registered saving	investment income, voluntary	not applicable			no deductions on contributions. First \$1,000 of investment income deductible; also dividend tax credit and half inclusion of capital gains

Table III-28 (cont'd)

Level of Government Involvement	Source of Retirement Income	Type of Benefit and Program	Eligibility	Benefit Payments 1977	Financing	Tax Features
	c) housing, and other non-income bearing assets	imputed income, voluntary	not applicable	not available		RHOSP deduction available. Imputed income and capital gains not taxed

(1) If a provincial top-up program qualifies under the Canada Assistance Plan, the federal government will pay a share of the benefit.

(2) There is a deduction of the first \$1,000 of annual income from this source.

(3) A breakdown of benefit payments for 1977 between private sector and public sector plans is not available.

CHAPTER IV

EVALUATING CANADA'S CURRENT RETIREMENT INCOME SYSTEM

The discussion to this point has been largely descriptive, outlining the nature of the current system and something of the manner in which it developed. This chapter seeks to evaluate various aspects of Canada's retirement income system.

A. Evaluation Criteria

A set of criteria is needed against which to assess the current retirement income system. Those used here are:

1. the amount of replacement income the system generates;
2. the fairness with which retirement income of all kinds is distributed and financed;
3. the economic effects of the system;
4. the degree of personal choice permitted regarding both the way in which retirement income is provided for and the form in which that income is taken;
5. the impact on the dignity of, and respect for, the elderly;
6. the level of public understanding of the system; and
7. the efficiency with which the system is administered.

The evaluation is made without detailed reference to cost and federal-provincial considerations. Although cost questions are dealt with briefly in this chapter in the section on economic effects, later chapters deal with them in a more comprehensive fashion. Similarly there is a separate chapter on the federal-provincial implications of changes in public policy.

Seven sections follow. Each describes one of the above criteria and evaluates the retirement income system in relation to it.

1. The Amount of Replacement Income Generated by the Retirement Income System.

a) The Meaning of Replacement Income. Replacement income in this report refers to income received in retirement from the Canada/Quebec Pension Plans (C/QPP), employer-sponsored pension plans, other registered retirement savings vehicles such as Registered Retirement Savings Plans (RRSPs), and private savings. In order for replacement income to be available, an individual has to defer some consumption of income during his or her working years, either through saving privately or through contributing directly or indirectly to pension plans. The amounts deferred are usually related closely to income levels during the pre-retirement period. Accordingly, the higher the replacement income available during retirement years, the greater the amount of consumption normally forgone during working years.

Replacement income - and the flat rate Old Age Security (OAS) pension - may be distinguished from pensions from the Guaranteed Income Supplement (GIS) and supplementary provincial plans by the fact that payments of the latter type are conditional on the current income of the recipient, whereas replacement income and OAS pensions are not. The OAS, however, is not considered to be a source of replacement income, as such, because the flat rate benefit is not related to the amount of pre-retirement earnings.

b) The Adequacy of Replacement Income Generated by the Current Retirement Income System. The fundamental question as to how much replacement income should be generated by an 'adequate' retirement income system comes down to a judgment about how an individual's consumption over his lifetime should be divided between working and retirement years. This report adopts the assumption that most Canadians would wish to organize the division of their lifetime consumption so that they would be about as well off in retirement as they were on average during their working years. This assumption was adopted because it seems unlikely that a significant proportion of the population would willingly undergo a sharp drop in their living standards on retirement or, alternatively, be prepared to forgo consumption during their working years to the extent necessary to enable them to enjoy a significant increase in living standards after retirement.

It is implicit in this concept - referred to elsewhere in this report as 'maintenance of living standards' - that there should be a particular amount and distribution of replacement income among the elderly. The purpose of this section is to determine the extent to which those who are now elderly are able to maintain pre-retirement living standards.

Unfortunately, there are at present no data available to provide a comprehensive measure of the relationship between the living standards of the current elderly and the living standards which they experienced during their working years. To have such a measure, it would be necessary to collect detailed income, expenditure and saving data from the same individuals over a period of many years.

Nevertheless, there are statistical sources that do provide at least some indication of the relationship between the well-being of the current elderly before and after retirement. One such source is provided by the administration of the Guaranteed Income Supplement. Its data show that in 1978 some 19% of all recipients of OAS also received maximum GIS benefits. This indicates that these people had no other income apart from the OAS. In that same year, the single rate OAS/GIS guarantee level was \$3,250 and for a married couple, both of whom were 65 or over, the guarantee level was \$6,200. (The levels were higher, of course, in those provinces which provided supplementary benefits.) In addition to the 19% who received maximum benefits, another 35% of OAS recipients also received partial GIS benefits, which indicates that their income levels in 1978 were between \$3,250 and \$4,600 in the case of those receiving single rate GIS benefits, and between \$6,200 and \$8,550 in the case of couples.

Of the 54% of the elderly who received full or partial GIS benefits, some would have had low incomes before they retired; these people would be expected to receive GIS benefits after they reached retirement age. (Indeed, some of them would be better off under the GIS after retirement than they were before.) But the very large proportion of the current elderly receiving GIS suggests that many who had incomes in the middle ranges during their working years are less well off now than they were before retirement.

Table IV-1, which is drawn from Statistics Canada's 1975 Survey of Consumer Finance, provides a further indication of the relative well-being of the current elderly. The first three panels of the table show the amount of replacement income - investment income, pension income from former employers and annuities, and C/QPP benefits - reported by the elderly in 1975. The fourth panel shows the aggregate amount received by the elderly from all three sources.

The table indicates that a very high proportion of elderly singles, a large majority of whom were women, and of elderly couples, reported little or no income from these sources. For example, 80% of elderly singles and 63% of elderly couples reported less than \$1,000 of income from investments in 1975. The proportion with less than \$1,000 in income from employer-sponsored pensions and annuities and from the C/QPP was even higher.

Table IV-1

Percentage Distribution of Investment and Pension
Income of the Elderly by Marital Status, 1975(1)

	Unattached Individuals 65 and Over	Couples Both 65 and Over	All Elderly Units
\$		(%)	
Investment income			
0	57	33	51
1 - 999	23	30	25
1,000 - 3,999	15	24	17
4,000 and over	5	13	7
Pension income, annuities, etc.			
0	79	60	74
1 - 999	7	10	8
1,000 - 3,999	11	22	13
4,000 and over	3	8	4
Canada and Quebec Pension Plan benefits			
0	80	54	74
1 - 999	16	36	21
1,000 - 3,999	4	10	5
4,000 and over	-	-	-
Investment income plus pension income and annuities plus C/QPP benefits			
0	44	18	37
1 - 999	24	23	23
1,000 - 3,999	23	32	25
4,000 and over	10	28	15

(1) See Notes to Table II-3

The bottom panel of the table aggregates all three sources of replacement income and shows that 60% of elderly units reported less than \$1,000 of income from these sources in 1975, and well over half of this group reported no replacement income whatsoever. Again, without knowing the pre-retirement income situation of these people, it is not possible to make precise statements about the relationship between their pre- and post-retirement levels of well-being. But the very high proportion of the elderly reporting little or no replacement income after retirement suggests that some substantial proportion of those who had been in middle-income groups during their working years were confronted with a marked drop in their living standards on retirement.

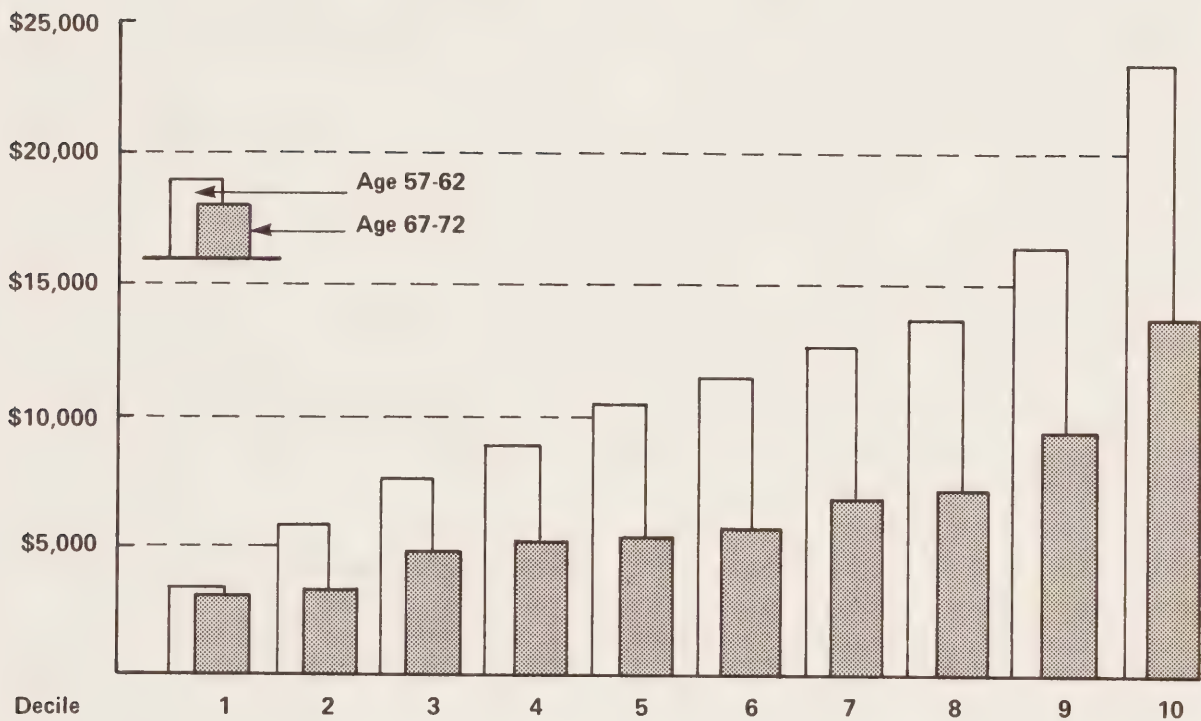
The table also indicates that unattached individuals have less income from these sources than couples. The principal reason for this is that unattached individuals are, on average, older than the married elderly. Since they have, on average, been retired longer, unattached individuals are more likely to have exhausted their private savings and, therefore, to have no investment income. In addition, the pensions and accumulations of the 'old' elderly reflect the fact that the wages and salaries they earned were lower than those of the 'young' elderly. The age difference also means that unattached individuals have been more severely affected by the effect of inflation on employer-sponsored pensions. And - to the extent that the pension system is immature - the older unattached individuals are less likely than couples to have pension income. Earlier data showed that a disproportionate share of the single elderly are women.

Another way of comparing the pre- and post-retirement well-being of the current elderly is through a more detailed examination of the 1975 Survey of Consumer Finance. Two groups were chosen for examination: couples where the highest-income recipient was in the 57 to 62 age range and where retirement was therefore likely to be imminent; and couples where the highest-income recipient was in the 67 to 72 age range, so that retirement had likely been fairly recent. (To ensure that the comparison was principally between couples where at least one member was in the labour force and retired couples, those younger couples with more than \$100 of pension income were excluded from the sample as were those older couples with more than \$500 of earnings.)(1)

Since the intention here is to compare the relative well-being of these two groups, their disposable incomes were determined.(2) Figure IV-1 sets out the disposable income data for couples in the two age groups by decile.

- (1) These procedures resulted in the exclusion of 13% of the couples in the younger group and 35% of the couples in the older group.
- (2) Disposable income for these purposes is total income minus income taxes; and for the younger group, Unemployment Insurance (UI) and C/QPP premiums and work-related expenses were also subtracted. As the Statistics Canada survey does not collect data on these latter items, amounts were imputed for UI and C/QPP premiums; and work-related expenses were assumed to equal 5% of earnings. No account was taken of savings behaviour.

FIGURE IV-1
Disposable Incomes of Couples
Age 57-62 and Age 67-72, by Decile, 1975



Source: See Text

Figure IV-1 indicates that the disposable income of the older group of couples was lower than that of the younger couples in each of the ten deciles. The difference was very slight in the first decile, reflecting the operation of income support programs for the elderly. For those in the middle of the income range - those in the third to eighth decile - the disposable incomes of the couples who were retired was equal on average to some 55% of the disposable income of those who were approaching retirement. Some of this difference may be attributed to the fact that the income of the younger group reflects recent productivity growth, whereas that of the older couples would be less likely to do so.

If it can be assumed that the well-being of the younger group is broadly reflective of what the well-being of the older group was ten years before, the basic image that emerges is one of a marked drop in disposable income of middle-income people associated with permanent withdrawal from the labour force.

In summary, the OAS and GIS play a crucial role in Canada's retirement income system. Some of the elderly are better off after retirement than they were before as a result of benefits received from these programs. However, a substantial majority of the elderly require income from other sources in order to come close to maintaining in retirement the living standards that they had enjoyed previously. But the heavy reliance of the elderly on the GIS, the large proportion of the elderly who have little or no replacement income, and the sharp drop in the disposable income available to retired couples in the middle-income ranges as compared to that available as they approached retirement, all provide compelling evidence that many older citizens experienced a sharp drop in their living standards when they retired.

If it is the case that most people wish to arrange their life-time consumption in a way that will enable them to more or less maintain the same living standards in retirement as they enjoyed during their working years, it must be concluded that the amount of replacement income currently available to the elderly as a group is insufficient to achieve that objective.

c) Defining 'Maintenance of Living Standards'. The previous section concluded that the current elderly do not have enough replacement income to maintain their pre-retirement living standards. Before determining what might be expected of the position of the future elderly in this regard, the notion of maintenance of living standards has to be more precisely defined. This section defines the concept; the next, (d), determines the amount of pension benefits required to maintain living standards as defined; and the one that follows it, (e), estimates the amount of replacement income that the future elderly will have.

Three questions require an answer in order to arrive at a definition of maintenance of living standards:

- which years should be selected to provide a proper basis for comparing living standards in the pre- and post-retirement periods?

- should a discount factor be adopted and, if so, what rate should it be?
- what allowance should be made for changes in consumption patterns associated with the pre- and post-retirement periods?

With respect to the first question, it was decided, for purposes of this report, to adopt consumption or living standards (the two terms are used here interchangeably) in the first year after individuals reached age 65 as representative of living standards for the entire retirement period. In the case of couples, the period adopted is the first year in which both the husband and the wife have reached 65. Living standards in that first year were measured by income less income taxes. Average annual consumption during working years was adopted as the measure to be applied for purposes of comparison with living standards in the post-retirement period. Subject to the qualification that follows, this means that if consumption in the first year of retirement is equal to the average level of consumption throughout an individual's working life, maintenance of living standards has been achieved.

As time passes, general productivity gains raise living standards and the real value of invested assets increases. Since, in this analysis, comparisons of individuals' well-being have to be made at different points in time, a question arises concerning what account, if any, is to be taken of these factors: what rate of discount should be used? Use of a zero discount rate would imply that a person having access to the same basket of goods today as he had 50 years ago is as well off now as he was then. But since standards of living have likely tripled and the real value of invested assets has probably more than quadrupled over the last 50 years, many would agree that such a person would be viewed by society as being less well off now than he was then. This perspective implies that a positive discount rate should be used in the analysis.

The question then arises as to what discount rate should be applied. One alternative would be to adopt a rate equal to the inflation-adjusted rate of return on investment yielded in the market. If, for example, the real rate of return was 3%, an individual would have the option of investing \$1 at the beginning of the year in order to produce a sum of \$1.03 at the end of the year. It might be argued that since the market yields such a return, an individual's well-being is maintained only if his consumption is 3% higher this year than last year. A second alternative would be to adopt a discount rate that was equal to the rate of real per capita economic growth. If, on average, people are 2% better off this year than last year, as a result of such economic growth, it could be considered that an individual would maintain his level of well-being in relation to the populace as a whole only if his standard of living rose by a similar amount. It is this latter approach which has been adopted for the purposes of this report - the real growth of average wages and salaries (AWS) being taken as a proxy for real per capita economic growth. (It might be noted that the notion of relative well-being implicit in the adoption of this discount factor is also reflected in the design of the C/QPP. Both of these plans 'revalue' the earnings on which the pension is based so that those earnings will bear the same relationship to the current level of AWS as they did during an individual's working lifetime.)

Changing consumption patterns also need to be taken into account in determining the levels of consumption adopted for purposes of comparing the pre- and post-retirement periods. It was decided, for example, that \$600 should be subtracted from the consumption of couples for each year a child was at home. This was considered to be the minimum expenditure that couples would be required to make to sustain a child at the level established by typical provincial welfare schedules in 1977. Expenditures on children in excess of this amount are considered as consumption on the part of the parents. In addition, an amount equal to 5% of earnings was subtracted from pre-retirement consumption to allow for work-related expenses. Further subtractions from earnings during working years were also made for taxes, savings, and contributions and premiums paid to pension plans and for unemployment insurance.

Therefore, using a discount rate equal to the rate of per capita economic growth, living standards of the elderly are said to be maintained when income less income taxes in the first year of retirement is equal to the average level of pre-retirement consumption - income less income taxes, pension and Unemployment Insurance contributions, savings, and child-raising and work-related expenses. Further details with respect to the approach adopted in the report can be found in Appendix 6.

d) The Appropriate Amount of Replacement Income. Given this definition, this section seeks to determine what size of pension plan is required during the pre-retirement period so that the resulting pension income would be sufficient to maintain pre-retirement living standards.

A computer model was developed to help answer this question. The model was designed to show the lifetime effect of various kinds of retirement income systems on those 18 years of age and just entering the labour force.(3)

(3) In this model, representative earnings profiles over the course of an individual's working years were derived from CPP earnings data. Males begin work at age 18 and pay income taxes, C/QPP contributions (at one-half of full cost rates), and UI premiums at 1977 rates until work ceases at 65. When the male is 25, he marries a partner two years his junior. The couple has one child a year later and a second two years after that. Family allowances are received in respect of the children. Deductions are made from pre-retirement consumption in respect of the children and work-related expenses at the levels noted in the text. The male retires at 65 and dies 14 years later; the spouse dies at age 82, having lived five years on her own. The results may be interpreted as representing outcomes for typical one-earner family units that survive intact until retirement. In the model, the OAS, family allowances, expenditures on children, etc. all grow at the rate of growth of average wages and salaries, as do the exemptions and rate brackets of the income tax system. This 'relative world' setting is described in more detail in Appendix 5. (The one exception to this 'wage-linked' scheme is C/QPP benefits, which remain price-indexed in the model to conform with existing legislation.)

Before reporting the results of the analysis, some of the assumptions and procedures lying behind it need to be detailed. In determining the size of the pension plan that would maintain living standards, it was assumed, for purposes of convenience only, that the form of the plan in question coincided with that of the C/QPP. It was also assumed that employees pay half of the full cost contribution rate (the rate required to cover the total cost of future benefits of new entrants into the plan), that benefits are based on a revalued earnings base, and that benefits are indexed to the Consumer Price Index (CPI).

Regarding the OAS, the base on which the replacement income part of the system sits, it was assumed that OAS benefits would be equal to 13% of AWS, as was the case in 1977.

The analysis concentrates on those whose pre-retirement earnings were in the middle 60% of the earnings range. The discussion was limited in this way since the income replacement vehicles are of less relevance to those with earnings in the first two deciles; their living standards in retirement will be heavily influenced by the GIS whatever replacement income they receive. Those with earnings in the top two deciles are ignored because the extent to which their living standards are maintained is of less relevance to public policy.(4)

(4) To give effect to this, the analysis to follow illustrates the effect of pension plans which have earnings ceilings equal to 1.5 times the level of AWS. As the table below shows, plans with earnings ceilings at the 1.5 AWS level restrict the replacement income of 20-30% of participants who are the highest earners.

Estimated Proportion of Workers for Whom Various Earnings
Ceilings Will Likely Have a Significant Limiting Effect*

	1.0 x average wages and salaries	1.25 x average wages and salaries	1.5 x average wages and salaries	2.0 x average wages and salaries
	(%)			
Males	65-75	50-60	30-40	10-20
Females	10-20	5-20	5-15	0-10
Combined	45-55	35-45	20-30	5-15

* The estimate with respect to the proportion of workers for whom various earnings ceilings serve as a constraint was derived from Tables 13-15 of Canada Pension Plan Contributors 1974, published by Health and Welfare Canada. In that year, AWS was approximately \$9,260. The table shows the proportion of CPP contributors whose earnings were above the average wage and salary level, and three multiples of this level, in their highest-income years, i.e. when they were aged 40 to 44.

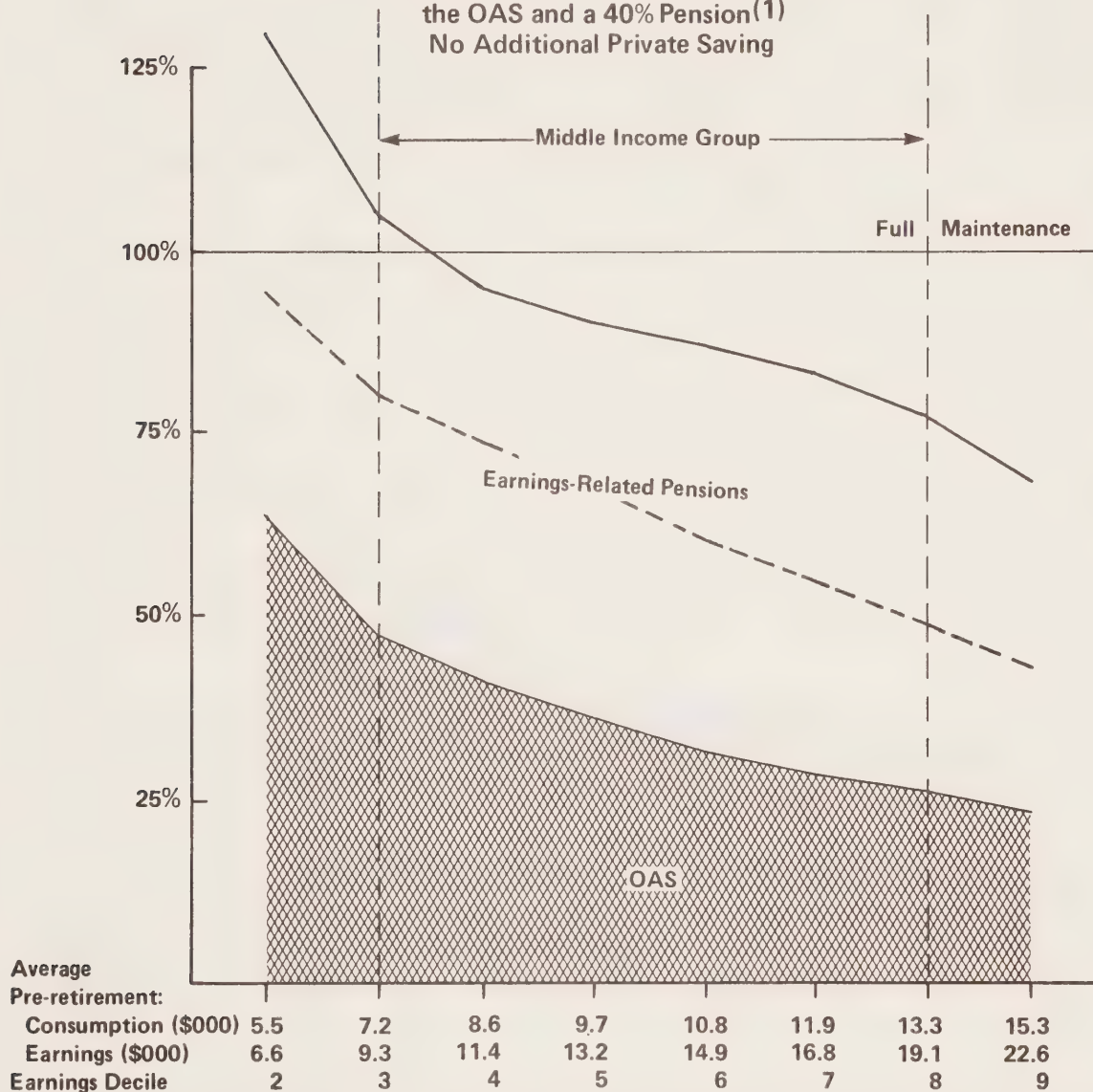
For reasons of simplicity, the analysis concentrates on one-earner couples. Appendix 6 provides parallel results for two-earner couples and for single people.

In considering the size of the pension plan required to maintain the living standards of middle-income people, a question that arises is what account, if any, should be taken of the private saving they undertake. While it might be argued that such saving should not be taken into consideration, this approach would ignore the substantial savings that many middle-income people accumulate through the equity in their own homes. Such an investment, in turn, has a significant bearing on the amount of replacement income they require to maintain their living standards in retirement, since those entering retirement owning their home mortgage-free need less pension and investment income to maintain their living standards than do those who rent. For this reason the analysis was widened to encompass homeownership. (It was assumed that homes owned by those who are retired are disposed of by bequest only after the death of the last surviving spouse.)

The main question at hand can now be posed with precision. In addition to OAS, what percentage of average adjusted pre-retirement earnings must be available to enable one-earner couples who are in the middle-income ranges during the pre-retirement years to maintain their living standards in retirement? This question is posed with respect to two groups - couples who have savings in the form of homeownership and those who have not.

Pension plans providing benefits of varying magnitude were tested to determine the extent to which living standards were maintained in retirement. The pension plans portrayed in the three figures that follow were chosen since they more or less maintained pre-retirement living standards for one-earner couples in the middle-income group. Figure IV-2, which focuses attention on the six deciles covering the middle-income group, indicates that, in the absence of private saving, the receipt of OAS benefits, plus total replacement income equal to 40% of average lifetime earnings up to a maximum of 1.5 times AWS, would provide full maintenance of living standards for those at the low end of the middle-income scale. But for those in the eighth decile, at the upper end of the scale, a pension replacing 40% of earnings up to 1.5 times AWS - plus OAS benefits - would result in a drop in living standards in retirement of almost 25%.

FIGURE IV-2
Extent to Which Pre-retirement Living Standards
are Maintained After Retirement by
the OAS and a 40% Pension⁽¹⁾
No Additional Private Saving



(1) The figure depicts results for one-earner couples who make no provision for retirement beyond the programs shown. Taxes, transfers and premiums are based on their 1977 values, the same year in which the earner enters the labour force. The earnings-related pensions replace the stipulated percentage of average adjusted pre-retirement earnings up to an earnings ceiling equal to 1.5 times average wages and salaries. In retirement, those in the second and third deciles receive GIS benefits and those in the other deciles pay some income taxes; these have been incorporated in the results.

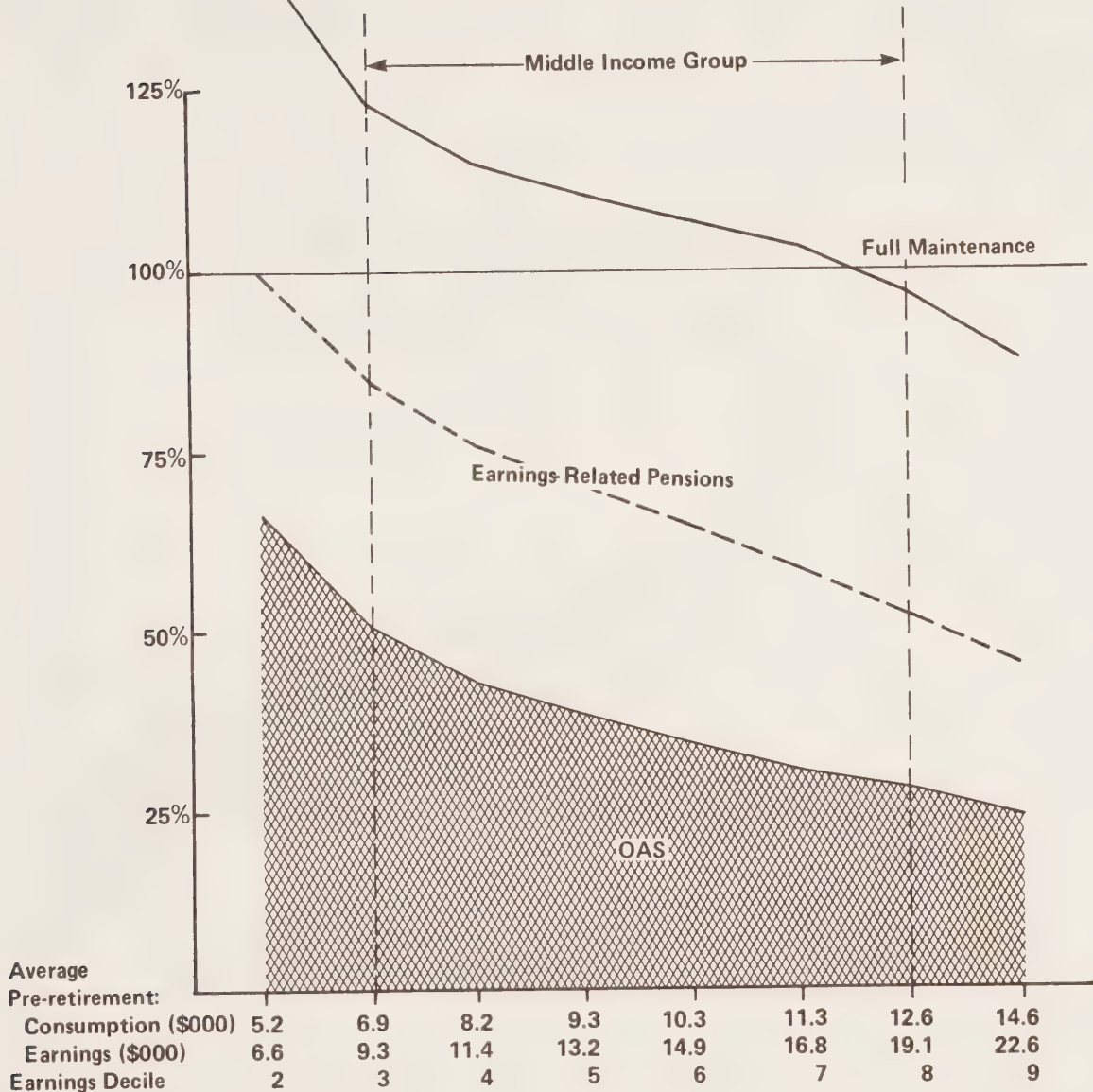
As the figure indicates, the OAS is the principal reason for the difference in the extent to which such a pension system would maintain pre-retirement living standards for people at different earnings levels. Because benefits under the OAS program are paid at a flat rate, they play a more important role in maintaining the living standards of those with low incomes than those with higher incomes. (The GIS also affects the extent to which living standards are maintained. In Figure IV-2, those in the second and third deciles receive benefits from this source.) The dotted line in the middle of Figure IV-2 shows the role played by the C/QPP, assuming that they provide 25% replacement on earnings up to the AWS, while the replacement above that line is produced by the incremental plan adopted in the model. (As noted, however, the GIS plays a role in the retirement income of those with low incomes. It should also be noted that small amounts of income taxes are paid in retirement by those in the other deciles.)

Figure IV-3 is similar in nature to the previous figure, but it incorporates two significant changes. Firstly, the size of the earnings-related pension plan is increased to provide 45% replacement of average lifetime earnings up to 1.5 times AWS, rather than 40%, with the employee premiums paid during the working period being increased to cover half the additional cost. Secondly, all participants are considered to have purchased a house which they own outright by the time they retire.(5) As a result of these changes, consumption during working years is lower than it was in the first case because of the higher contributions made to the pension plan and the savings embodied in the home. During the retirement period, consumption is higher in this second case because of the larger pension payments received and because the couple is consuming what might be called the 'imputed rent' associated with their home.

(5)The value of the home at retirement is set to equal some 2.2 times earnings in the last year of work.

FIGURE IV-3

Extent to Which Pre-retirement Living Standards
are Maintained After Retirement by the
OAS and a 45% Pension
Homeownership Assumed(1)



(1) See footnote to Figure IV-2

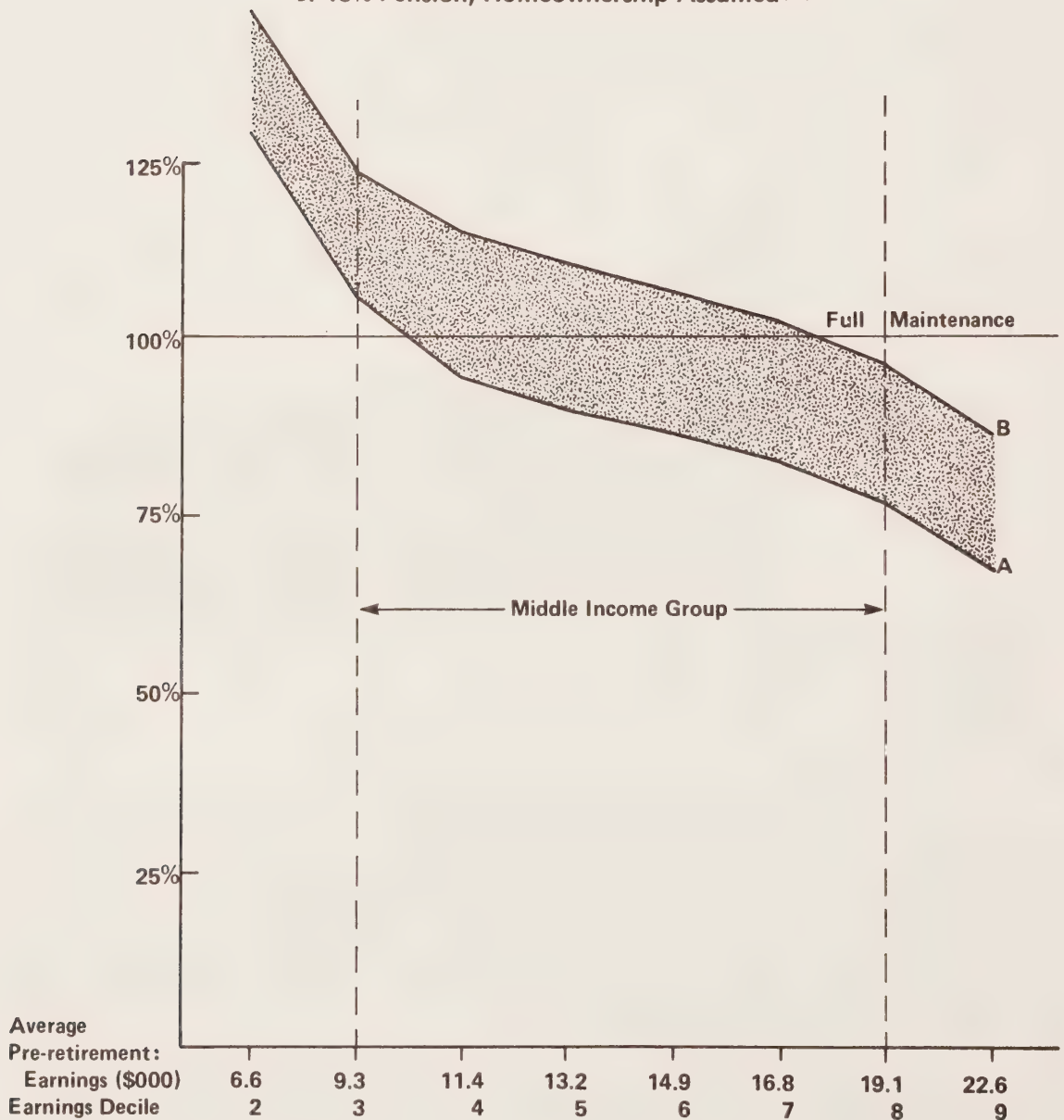
In this second case covered by Figure IV-3, the OAS and a 45% pension (which incorporates the existing C/QPP) more than provide for the maintenance of living standards of almost all of the six deciles covering the middle-income group. This is indicated by the fact that most are above the Full Maintenance Line. Approximately one-third of the change in this second case, as compared to the first, is the result of the increase in the pension from 40 to 45%, and the remainder is due to the effect of homeownership.

Since a 45% pension in conjunction with saving through homeownership places most middle-income couples above the Full Maintenance

Line, and since a 40% pension without homeownership leaves most such couples below the line, it was concluded that a pension plan replacing something in the range of 40-45% of average pre-retirement savings would, together with OAS, more or less maintain the pre-retirement living standards of one-earner couples in the middle-income group. Figure IV-4 brings together in one diagram the results of the two cases to facilitate a comparison of the outcomes. Appendix 6 shows that the lines in Figure IV-4 are somewhat lower for two-earner couples. They are significantly lower for single people (due principally to the availability of only one OAS).

FIGURE IV-4

Extent to Which Pre-retirement Living Standards
are Maintained After Retirement by the
OAS and by:
A. 40% Pension, No Additional Private Saving
B. 45% Pension, Homeownership Assumed(1)



(1) See footnote to Figure IV-2

Based on the assumption that the vast majority of middle-income couples would wish to have living standards in retirement that were roughly equivalent to those they experienced before, it seems evident that, in addition to OAS, a pension plan that provides replacement income in the range of 40-45% of average pre-retirement earnings up to 1.5 times AWS would achieve this objective in most cases. (The C/QPP will, after a catch-up period, provide replacement income of 25% on earnings up to AWS.)

e) The Amount of Replacement Income Available to the Future Elderly under the Existing Retirement Income System. The analysis to this point has indicated that a substantial proportion of the current elderly who were in the middle-income bracket during their working years are considerably less well off in retirement than they were before. It has also indicated that if middle-income earners now in the labour force are to maintain their pre-retirement living standards, replacement income of around 40-45% would be required.

As part of the evaluation of the present retirement income system, it is necessary to consider what amount of replacement income that system will generate in the years ahead and, hence, the extent to which it will serve to maintain the living standards in retirement of the future elderly.

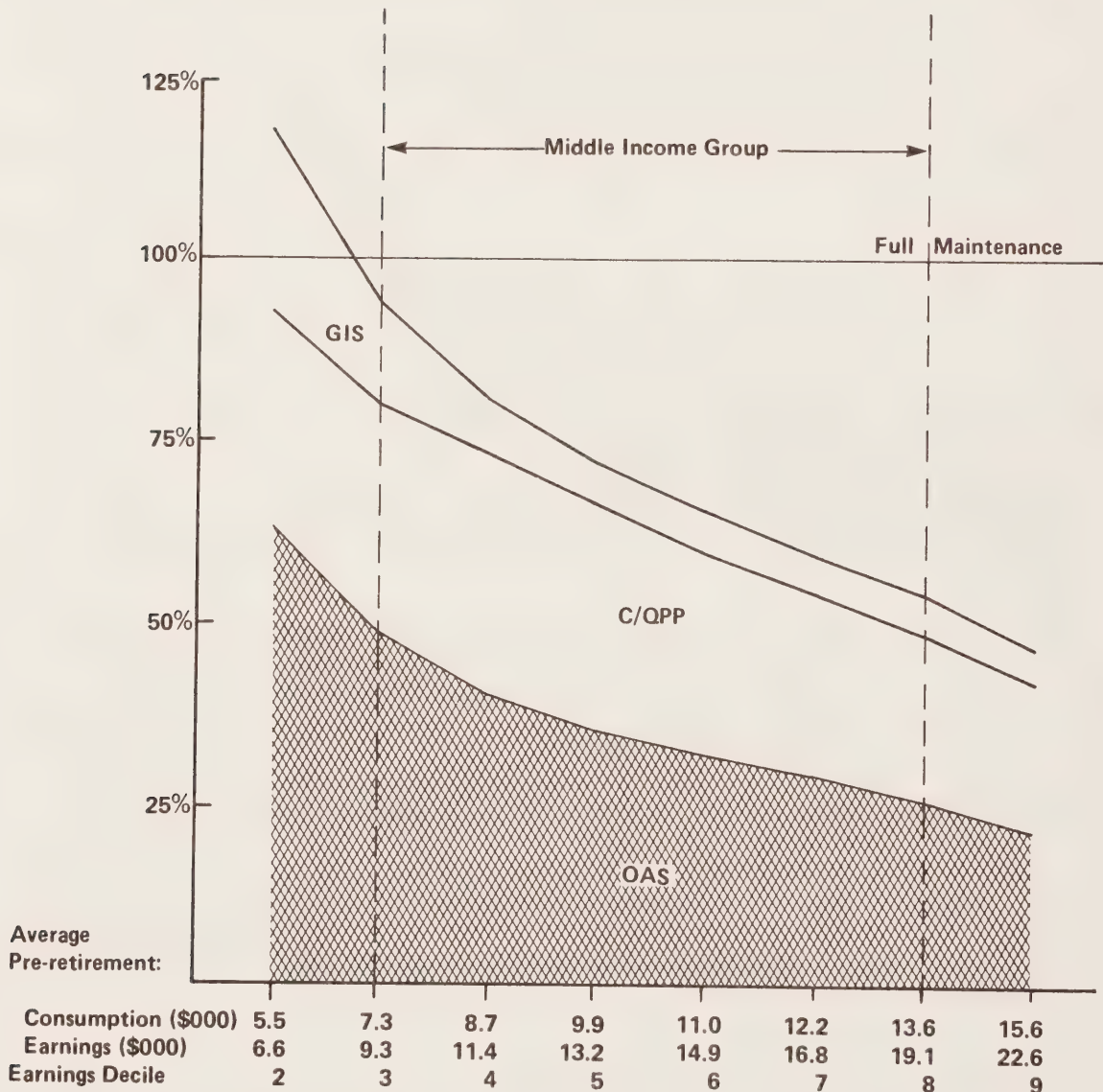
The most important single factor bearing on the prospective position of the future elderly, as compared to that of the current elderly, is the C/QPP. As explained in Chapter III, the first C/QPP pensions were paid in 1967, and then only on a prorated basis. It was not until 1976 that the transitional prorating formula ceased to apply and full benefits became available under these two public plans. As a result, many of those now retired never qualified for any C/QPP benefits and many more qualified only for reduced benefits because of the prorating system. The relative insignificance of C/QPP pensions in relation to the income of the elderly in 1975 is evident from data contained in Table IV-1.

By the early years of the next century, however, all of those reaching age 65 who had earnings from employment during their working lifetime (or who are survivors of those who did) will be eligible for full C/QPP benefits. Moreover, by that time the level of earnings covered by the plans will have reached the level of AWS - in line with the provisions of the C/QPP. This higher level of covered earnings, in turn, will expand the role played by the C/QPP in the retirement income system of the future. In 1978, the full amount of benefits paid to pensioners and their survivors under the plans was equivalent to only about one-quarter of OAS payments. Shortly after the turn of the century, however, it is likely that the value of C/QPP pensions will exceed that of OAS pensions (assuming that the 1977 relationship between OAS benefits and AWS is maintained).

Figure IV-5, which follows the same format as Figures IV-2 to IV-4, shows the extent to which pre-retirement living standards will be maintained for one-earner couples where full cost rates are charged for the 25% C/QPP benefits, and where OAS/GIS benefits maintain the same relationship to AWS as that existing in 1977. The one-earner couples make no provision for retirement beyond that embodied in the programs shown.

FIGURE IV-5

Extent to Which Pre-retirement Living Standards
are Maintained After Retirement by
the Public Pension Programs(1)



- (1) The C/QPP replaces 25% of pre-retirement earnings up to the level of average wages and salaries. The employee pays one-half of full cost C/QPP rates. Taxes, transfers and UI premiums are based on their 1977 values, the same year in which the earner enters the labour force.

Figure IV-5 makes it clear that even when the current public pension system is fully mature, the great bulk of middle-income couples who depend solely on the public programs for income in retirement will undergo significant reductions in levels of well-being upon retirement. For a one-earner couple with average pre-retirement earnings (after adjustment) of \$13,200, for example, living standards in the first year of retirement will drop by more than one-quarter from the average level attained in the pre-retirement period. For a one-earner couple with average pre-retirement earnings equal to \$19,100 living standards would be cut almost in half. The figure also highlights another very important fact, namely, that even with a mature C/QPP all couples with no other income except OAS and C/QPP benefits will still be eligible for benefits from the GIS.

It is, of course, not surprising that a 25% C/QPP that covers earnings up to the level of average earnings and salaries produces such a result. As the previous section showed, a pension that replaces 40-45% of pre-retirement earnings up to 1.5 times AWS is required for middle-income couples to maintain their living standards after retirement.

Figure IV-5 shows the position when no private provision is made for retirement. It raises a question. To what extent will the living standards of the current working generation be maintained in retirement when account is taken of income from private arrangements - from employer-sponsored pension plans and investments? Unfortunately, it has not been possible to provide a precise answer to this question owing to the lack of the necessary data. However, rough estimates have been made of both the amount of replacement income that can be expected from earnings-related pensions (employer-sponsored pension plans and the C/QPP) and from private savings.

Table IV-2 is based on the results of a study that examined the estimated effect of the employer-sponsored pension system on future levels of replacement income taking account of the levels of labour mobility of plan members. (The characteristics of the system focused on were the percentage of labour force members covered by plans, the size of plan benefit levels, and vesting and other portability provisions.) The study is summarized in Appendix 8. The table presents an estimate of the level of replacement income from the C/QPP and from employer-sponsored pension plans that those currently in middle-income groups will receive in retirement.(6) (As noted elsewhere, the middle-income group refers to those having incomes in the middle 60% of the income range.)

(6)Appendix 19 details the assumptions lying behind these estimates.

Table IV-2

Estimated Amount of Replacement Income to Be Received by
Middle-Income People from Employer-Sponsored Pension
Plans and from the C/QPP

Amount of Replacement Income	Percentage of Middle- Income Recipients
(%)	
Less than 25	63
25-29	6
30-34	4
35-39	6
40+	21
Total	100

Note: Owing to the C/QPP, a high proportion of those in the 'less than 25' category can expect replacement income close to the 25% level.

Table IV-2 indicates that 63% of those now in the middle-income group are expected to receive less than 25% replacement income from public and private earnings-related pensions. It is also estimated that about one-fifth of the group will receive pension income from employers and from the C/QPP that replaces 40% or more of their average (adjusted) pre-retirement earnings.

Table IV-3 provides estimates of the amount of replacement income expected to be associated with private savings. The table is based on investment income reported for tax purposes by middle-income taxpayers. Appendix 19 details the assumptions used in deriving these data.

Table IV-3

Estimated Amount of Replacement Income to Be
Received by Middle-Income People from Private Savings

Amount of Replacement Income	Percentage of Middle- Income Recipients
(%)	
0	50
1-4	15
5-14	9
15+	10
Unknown(1)	16
Total	100

(1)The replacement income position of those making substantial contributions to RRSPs cannot be estimated. For an explanation, see Appendix 19.

Table IV-3 indicates that half of the group under consideration is expected to have no replacement income from private savings. Tables IV-2 and IV-3 can be used to arrive at a rough estimate of the future replacement income position of those now in the middle-income group. Table IV-3 indicates that an estimated 65% of this group will enter retirement with private savings that will replace less than 5% of their pre-retirement earnings. If it is assumed that those with higher levels of expected replacement income from pension plans (the 31% in Table IV-2) are all among the 65% with low levels of expected replacement income from private savings, it follows that, at the very least, some 34% of the middle-income group (65% minus 31%) would have total replacement income of less than 35% - well below the 40-45% replacement income considered necessary to maintain living standards. Furthermore, as is apparent from Appendix 19, the method used to derive this estimate tends to understate significantly the proportion of those whose living standards can be expected to fall in retirement. Therefore, it is concluded that somewhere between one-third and one-half of those now under 65 who are in the middle-income group will encounter significant reductions in levels of well-being upon retirement when all retirement income sources - as well as changes in consumption patterns, tax treatment, and so on - are taken into account.

f) Conclusion. The lack of data makes it difficult to arrive at precise judgments concerning the adequacy of the replacement income in the hands of the present elderly and of the expected level of replacement income of the future elderly. The previous analysis and discussion, however, point strongly to the following conclusions:

- a substantial proportion of the current elderly who had been in the middle-income group during their working years are now significantly less well off in retirement; and
- while the situation will improve with the maturation of the C/QPP and the growing proportion of the elderly who will qualify for benefits in the future, the information available on the amount of replacement income to be provided from private savings and employer-sponsored pension plans suggests that between one-third and one-half of current middle-income earners will experience a significant reduction in living standards when they retire.

2. The Fairness with which Retirement Income Is Distributed and Financed. There is unlikely to be a single definition of a 'fair' retirement income system that is acceptable to all people. Most definitions, however, would include the following elements. Firstly, people in essentially similar economic circumstances should be treated more or less the same in terms of the net contributions they make and the net benefits they receive. Secondly, those whose relative economic position is strongest should pay out more than they receive; and those whose relative economic position is weakest should receive more than they pay. Thirdly, the amount of redistribution implicit in the second element should not be so great as to limit seriously the rewards from, and incentives for, work and saving.

In turn, these broad generalities lead to four specific questions about the retirement income system. They are:

- a) Is the redistribution between income groups within a cohort (or generation) in the appropriate direction and of significant magnitude?
- b) Is the system fair to individuals within a cohort in the sense that those who save and/or pay contributions, will in fact be better off than those who do not?
- c) Is the system fair between individuals (or groups of individuals) within a cohort, and within various income groups? That is, are those in similar economic circumstances treated reasonably equally?
- d) Is the system fair between cohorts or generations?

a) Is the Redistribution between Income Groups in the Appropriate Direction and of Significant Magnitude? This question needs to be considered from the viewpoint of both the current elderly and the future elderly.

i) The Current Elderly. Data are not available in a form that would allow a precise analysis of the way in which taxes and transfers have affected the economic position of the current elderly over the whole of their adult lives. Accordingly, no firm statement can be made about the cumulative effect the tax and transfer systems have had on today's elderly population. However, it is possible to make some observations that at least are suggestive of the redistributive impact of the system in place today in relation to the current elderly.

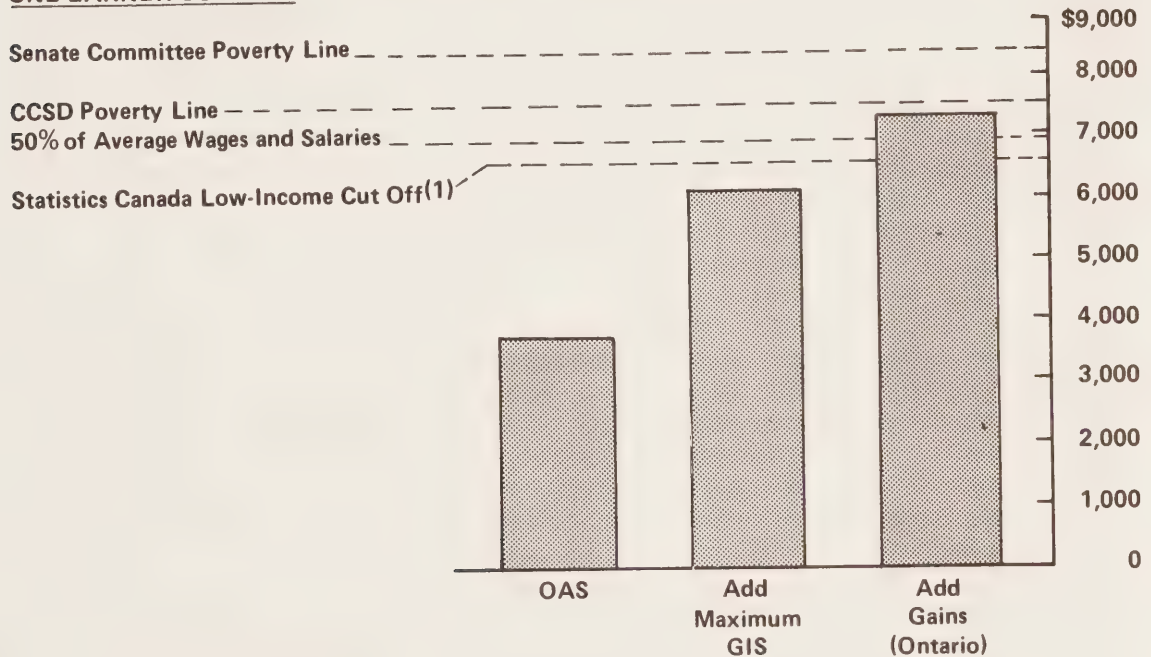
Two of the principal public programs, the OAS and GIS, are redistributive. The flat rate nature of the first and the income-tested character of the second, taken together with the incidence of the tax system as a whole, virtually guarantee that the poor among the current elderly receive net transfers through the retirement income system.

The question of whether the transfers are large enough can be approached by considering how the elderly fare in relation to poverty standards. There is no consensus as to what standards are appropriate. Some approach such analysis from the budget perspective, employing incomes calculated by provincial governments or social welfare agencies as the minimum required to cover the cost of essential goods and services. Such an approach entails difficulties, however, since the criteria used by these organizations appear to diverge in important respects. Another approach is to examine how the income guarantees for the elderly compare both with average incomes for working Canadians and with minimum-income standards that define poverty in relation to the standards of today's society. Statistics Canada, the Special Senate Committee on Poverty, and the Canadian Council on Social Development (CCSD), have each developed such minimum-income standards - although some also incorporate elements of the budget approach. While each has drawbacks, they at least provide a general sense of the adequacy of the guarantees for the elderly. (The Statistics Canada levels are referred to as low-income 'cut-offs'.)

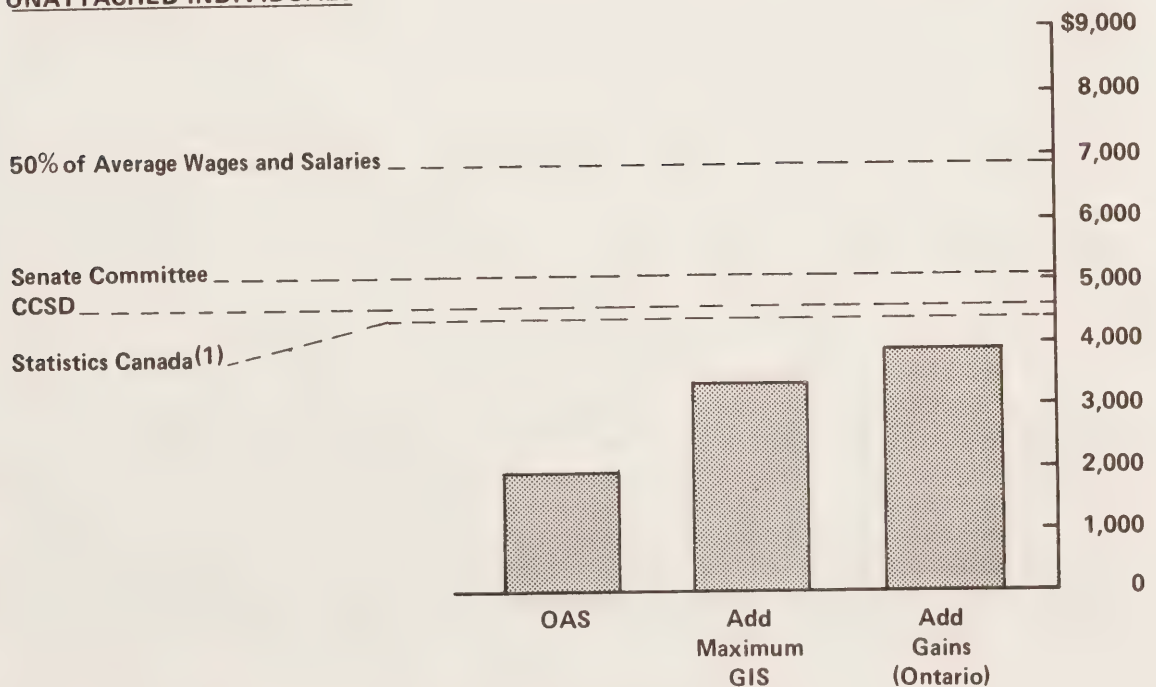
The minimum standards adopted by each body are shown in Figure IV-6, along with the corresponding OAS and GIS levels. Benefit levels for the Ontario Guaranteed Annual Income System (GAINS) are included for reference purposes.

FIGURE IV-6
Benefit Levels Guaranteed in 1978

ONE-EARNER COUPLES



UNATTACHED INDIVIDUALS



(1) Based on residence in urban centres with 100,000 – 500,000 population

Two conclusions can be drawn from the figure. Firstly, the cash incomes guaranteed to elderly single individuals who are receiving the maximum GIS benefit are substantially below each of the above minimum-income standards. Therefore, it is not surprising that a frequent criticism of the public part of the retirement income system relates to the treatment accorded the low-income unattached individual, who is typically female, widowed, and in her seventies or older. This criticism is well founded. (It should be added, however, that the guarantee levels associated with the OAS/GIS almost without exception exceed levels of provincial social assistance available to one- and two-person family units - that is, the elderly poor are relatively better off in terms of established poverty lines than are the non-elderly poor.)

Secondly, the minimum income that the OAS/GIS guarantees to couples, as compared to single individuals, is significantly better in relation to the various measurements of poverty set out in Figure IV-6 but it is still below the poverty level as defined by each of the three bodies. This suggests that there remains particular cause for concern in those provinces which do not supplement OAS/GIS benefits.

The above seems to imply that the magnitude of redistribution in favour of the elderly is unsatisfactory. However, although the federal guarantee levels, particularly for single individuals (who make up almost half the elderly), appear too low, it does not follow automatically that all those who receive the full GIS entitlement are in straitened circumstances. GIS entitlement is based on money income, and does not take account of transfers from other members of the family, homeownership, or capital - as opposed to income. Therefore, although there is good reason to be concerned about the adequacy of the guarantee levels as such, not all those drawing GIS are in equal need. Some certainly are in need; others, particularly those with mortgage-free homes or in subsidized housing, are likely less so. While there are reasons for the GIS to be based on an income test only - the desire to minimize stigma, the ease and low cost of administration, and the ease of understanding of the program - the effect of income testing is to make the same GIS benefits available to those with varying needs. In turn, this suggests that a higher general guarantee level is not necessarily needed, because this would effect redistribution toward those with wealth - as well as toward those without. In brief, while a greater measure of redistribution appears desirable, the greater the account taken of wealth, the smaller the amount of resources that would be required to raise the economic position of all the elderly to any specified level.

Another aspect of the distribution of income among the elderly relates to the replacement income they receive - a point discussed under the first evaluation criterion above. It need only be repeated here that if there were equal incidence of saving and equal accrual of employer-sponsored pension benefits in all income groups in a cohort during their working years, the distribution of post-retirement replacement income would tend to mirror the distribution of income that existed before retirement. As the earlier section showed, however, the retirement income system has not produced results that in any way resemble such an outcome. Indeed, many of the present elderly, who were far from poor

before retirement, have little or no replacement income. As a result, the distribution of income among the current elderly is quite different from the distribution of the same group's pre-retirement income.

ii) The Retirement Prospects of the Future Elderly. The above perspective takes no account of the fact that design features of the present system will likely make the amount and distribution of the income of those who will be elderly 20 years from now quite different from what it is for today's elderly. What can be said of the fairness with which the incomes of the elderly 20 years hence will be distributed?

The size and distribution of the incomes of those who are over 65 at the turn of the century will be influenced in an important way by a number of factors: the maturation of the C/QPP; the role played by investment income and employer-sponsored pension plans in the future; whether or not the OAS and GIS benefits then will bear the same relationship to AWS as they now do; and the greater importance assumed by the tax system as aggregate income from the C/QPP - and possibly from Registered Pension Plans (RPPs) and RRSPs - increases, with the result that tax deductions and exemptions take on more significance as the elderly move into higher marginal tax brackets.

The first and second of these factors have already been discussed. Of the last two, the greater uncertainty probably attaches to that relating to future OAS/GIS benefit levels. There is no way of knowing whether the legislation governing OAS and GIS payments will be changed from time to time so that their benefit levels more or less reflect productivity changes, or whether the benefit levels will be simply price-indexed for the next 20 years. If the present relationship of these programs to average wages and salaries is maintained, the combined benefits receivable from them and from the C/QPP will leave the future elderly better off relative to the non-elderly than is the case today. That is, the adequacy of retirement income will be improved. Moreover, the distributional impact of the three programs will be such as to continue to transfer income from people with higher incomes to those with lower incomes. Taken together, the programs will remain progressive, although somewhat less so than is the case at present given the earnings-related nature of the C/QPP. On the other hand, prospective improvement in the position of the future elderly could be reduced or nullified if increases in OAS and GIS benefits are allowed to fall significantly behind the rise in wages and salaries. In that event, the amount of redistribution of income would decline substantially and the guarantee levels for the elderly would almost certainly be unsatisfactory in relation to minimum-income standards of the future.

iii) The Prospective Life Cycle of the Future Elderly. The above perspective on the future elderly is a limited one because no consideration has been given to pre-retirement activities, including work effort and saving. However, taking account of these activities in general is a complex task. The discussion here seeks to establish what effect the present retirement income system in its entirety has on the distribution of lifetime consumption, taking into consideration such factors as

personal savings, pension contributions, taxes, benefits, and investment income. It is based on results provided through the computer simulation model mentioned briefly earlier in this chapter and described in detail in Appendix 5. The focus is on a single age group - those aged 18 in 1977. For purposes of analysis, this group is assumed to start working in a world where the C/QPP are mature and full cost contribution rates are charged; the income tax system and OAS/GIS benefits are maintained at the 1977 level in relation to the size of the economy. A constant rate of per capita economic growth is also assumed.

This framework permits an evaluation of the retirement income system to be extended into the future. The lifetime redistributive impact of the post-retirement benefits of the various elements of the retirement income system can then be assessed in conjunction with a corresponding set of pre-retirement contributions and taxes.(7)

The results of the analysis show that, from a lifetime perspective, the system will be substantially redistributive, due principally to the combined effects of the progressive personal income tax system, the flat rate OAS, and the income-tested GIS. In present value terms, the poorest 20% of the population will receive in benefits more than one and one-half times the amount they paid in the form of C/QPP contributions and federal taxes. At the same time, the top 20% will receive benefits equal to somewhat more than half of their contributions. Of course, these results would be affected by altering any of the factors involved - for example, the tax deductibility of C/QPP contributions, the taxation of OAS and C/QPP benefits, individual saving patterns, and the alternative assumptions regarding the ultimate incidence of federal taxes. However, the impact of altering any of these factors would not be strong enough to reverse the general conclusion.

iv) Summary. The first question considered in this section concerned the direction and amount of redistribution in the retirement income system. With respect to the current elderly, the direction is appropriate

(7)The basic public program benefits are the C/QPP and the OAS/GIS. In the case of the C/QPP, clearly identified contributions are made to pay for these benefits. However, there is no obvious counterpart to C/QPP contributions in the case of the OAS/GIS. In order to put the OAS/GIS and C/QPP into a comparable analytical framework, such a counterpart must be defined. The choice made was that fraction of federal tax revenue from all sources which, if invested, would exactly equal the age group's total OAS/GIS benefits.

in the sense that the poor among the elderly now receive substantial net transfers from the wealthier in society. However, the amount of redistribution is not sufficient in some cases. More specifically, the guarantee levels for unattached individuals who live alone, particularly those who have to finance fully their accommodation out of current income, are too low in relation to generally accepted definitions of poverty.

The other question raised here related to the future elderly. In general, viewed over the life cycle, the public system now in place appears to be substantially redistributive. Also, if OAS/GIS benefit levels maintain their relationship to AWS, and investment income and employer-sponsored pensions play a role comparable to that played today, the maturation of the C/QPP assures that the future elderly will be better off than the elderly of today - both in relation to the non-elderly and to their own pre-retirement living standards.

This improvement in the circumstances of the future elderly, as compared to the current elderly, does not mean that all of the future elderly (under the assumptions stated here) will enjoy consumption levels in retirement equal to those in their working years. As already noted in the discussion of replacement income (Section 1), despite the expected improvements, that is not at all the case.

b) Is the Retirement Income System Fair to Individuals Within a Cohort in the Sense That Those Who Save Substantially, or Who Make Large Pension Contributions, are Better Off Than Those Who do Not? Since a life cycle perspective is involved, the model described previously was again used to help answer the question.

A prior point that needs discussion is the measure adopted to determine whether one person is better or worse off than another. Consider the following example. An individual invests \$100 for one year at a 3% rate of return, assuming there will be no inflation. His marginal income tax rate is 33 1/3%. At the end of the year he would then have \$102 after tax. Will the individual consider himself better or worse off for having saved? The standard approach to this question is expressed in terms of the 'subjective discount rate' - that is, the rate at which people, whether they are conscious of it or not, are willing to trade off current for future consumption.

In the example above, the individual will consider himself to be better or worse off for having saved depending on whether his subjective discount rate is less or more than 2%. For instance, if the individual had a subjective discount rate of 2.5%, he would find that any return after taxes of less than \$2.50 on his \$100 investment failed to provide him with a sufficient incentive to save. Thus, the question above requires that something be known or assumed about the subjective discount rate of savers.

In fact, the choice of discount rates is a matter of substantial controversy. It is not clear what rate should be used for analytical

purposes. Moreover, discount rates likely vary with personal inclination and with income levels - those with lower incomes giving greater weight than those with higher income to current consumption, as opposed to future consumption.(8)

Despite these difficulties, the life cycle model described previously can offer some indication of the effect of those current provisions of the tax and transfer systems which are aimed at encouraging saving. For purposes of this analysis, it was assumed that the subjective discount rate of all participants was equal to the assumed rate of per capita economic growth of 2%. This is a plausible choice in that it implies that if the economy as a whole is 2% richer next year as a result of productivity growth, each participant within it will consider himself as well off next year as this year if his consumption increases by 2%.

The analysis begins by assuming that in a non-inflationary environment, the market rate of return available before taxes on a mixed portfolio of stocks, bonds and mortgages is 3.5%. When the impact of taxes is taken into account (except the provisions in the tax system which provide favourable treatment of savings in RRSPs and other registered pension vehicles), those in the upper half of the income spectrum who save during their working years achieve an after-tax rate of return in the 2 to 2.3% range. If, as assumed earlier, the subjective discount rate of these individuals is 2%, then they are no better off or only slightly better off for having saved. (Saving by those in the lower half of the income spectrum is considered below.)

Moreover, when inflation is introduced into the picture, the results worsen. Given the impact of taxes on the income generated by the higher nominal yield associated with inflation, the after-tax rates of return achieved (when they are reported on an inflation-adjusted basis) are lower than the 2 to 2.3% cited above.(9)

One of the principal provisions for savers in the income tax system is the RRSP. (Employer-sponsored pension plans, RPPs, provide virtually identical tax incentives.) When saving is carried out through an RRSP, two factors operate to increase the after-tax rate of investment return. Firstly, the after-tax rate of return is increased because the tax on both the principal amount saved and the return earned is deferred. All other things being equal, there is an advantage to taxpayers in paying taxes later rather than sooner, and RRSPs provide this opportunity. This advantage is analogous to the advantage associated with an interest-

(8)The recent increases in personal saving, when real after-tax rates of return are frequently negative, may imply a negative subjective discount rate, i.e. a willingness to trade \$100 of consumption today for less than \$100 next year. This behaviour can perhaps be explained on the basis of an expectation that economic conditions may worsen, or that well-being in retirement may depend to an important extent on having accumulated sufficient personal savings, whatever the rate of return earned on those savings.

(9)Later sections of the report will examine data on inflation-adjusted rates of return.

free loan. Secondly, if the saving through RRSPs occurs at a time when the taxpayer faces marginal tax rates higher than when the accumulations are ultimately taken into income, lifetime taxes will be lower than they otherwise would have been. In this respect, the RRSP vehicle may be regarded as an income-averaging device. When these two effects are taken into account, the model indicates that for those in the upper half of the income spectrum the after-tax rate of return would, on the basis of the assumptions made, tend to be between 3.5 to 4%. This is higher than the after-tax return of between 2 to 2.3% that results if the RRSP tax shelter is not used; it is also equal to or higher than the assumed pre-tax rate of 3.5%. The RRSP after-tax, inflation-adjusted rate of return results are not materially changed when an inflationary environment is assumed.(10)

Thus, RRSPs (and other registered vehicles) increase the after-tax rate of return to savings. Furthermore, when inflation occurs, those with relatively large accumulations outside registered savings plans tend to be significantly worse off in terms of inflation-adjusted, after-tax rates of return on their savings compared to those whose savings are held in the form of RRSPs.

In summary, with the availability of the RRSP vehicle in the income tax system, middle- and upper-income groups face no significant disincentives to save for retirement; if anything, RRSPs provide significant incentives to do so.(11)

The situation is quite different for those in the lower end of the income spectrum - many of whom can expect to qualify for benefits under income-tested programs after retirement. For these people, there is little or no incentive to invest in RRSPs or other similar vehicles. Consider the case of an individual who has saved during his working years through contributions to one of the registered retirement savings vehicles. Suppose that at the time of his retirement the amount saved in the plan is invested in an annuity. Over the period that the annuity remains in force, he receives a fixed amount every year - part of which is paid out of the accumulated capital and part of which is paid out of the interest earned on the capital sum remaining. The total amount of the annual payment, including both interest and the withdrawal of capital,

(10) Inflation-adjusted rates of return would be lower, however, if the annuity into which an RRSP accumulation was converted generated payments whose nominal, rather than real, value was constant. (This is now the usual case.)

(11) It may be noted that this conclusion is premised on the current personal income tax base, which is annual income. Alternative tax bases include lifetime income and lifetime consumption. An evaluation of saving incentives against these alternative tax bases might well yield different results. But the choice of a tax base is a much broader question - one that is beyond the scope of this report.

is regarded as income for purposes of the income test applied to determine eligibility for GIS and any supplementary provincial benefits that may be available. In the case of the GIS alone, the benefit-offset rate is 50%. That is, for every \$1 of income received, other than that from the OAS, the amount of GIS benefit is reduced by 50 cents. The combined impact of GIS provisions, and of the provisions applying in most provinces offering supplementary payments, is to reduce benefits by \$1 for every \$1 of other income received.

Considering the effects of the GIS alone, those in the lowest 20-30% of the income spectrum who save through an RPP or RRSP will be worse off in terms of their lifetime consumption than if they had not saved at all. They are worse off in the sense that the rate of return on their investment, after taking account of taxes and transfers, is below 2% - the assumed subjective discount rate. On the one hand, they have forgone consumption during their working years in order to save for retirement, but the tax benefits of the deductibility of their RPP or RRSP contributions have not been substantial because they are in low marginal tax brackets or, indeed, non-taxable. On the other hand, once they retire the annuity payments they receive wholly or partially offset the benefits to which they would otherwise be entitled from the GIS. As a result, they are little or no better off in retirement than those who did not save, and they may even be worse off.⁽¹²⁾ With provincial top-ups, this situation is worsened. One implication of this conclusion is that some low-income individuals can be forced to undergo a reduction in lifetime consumption when they are required to participate in an employer-sponsored plan.

The effect of high benefit-offset rates appears, at first glance, to be similar for low-income people who save outside of the registered retirement vehicles (by investing directly in securities such as stocks and bonds) and those who save inside of them. But there are differences. Those with low incomes before retirement pay little or no tax on any investment income received in the pre-retirement period. While the income from investment is taken into account in determining eligibility for GIS benefits, the amount of capital is not. This contrasts with the situation of an individual who, during his working years, has made tax-free contributions to an RPP or an RRSP, all of which subsequently become treated as income for both tax and GIS purposes. In the case of low-income earners who accumulate funds outside of a registered retirement vehicle, real after-tax and transfer rates of return that can be achieved over a lifetime are higher than the assumed subjective discount rate of 2%.

In summary, saving through, or participating in, a registered retirement vehicle is not advantageous to low-income individuals because they simply substitute their own income in retirement for benefits otherwise available from income-tested public programs. This does not necessarily apply to low-income individuals whose retirement savings were not accumulated in registered retirement vehicles.

⁽¹²⁾These generalizations derive from details in Appendix 5.

c) Is the Retirement Income System Fair Between Individuals (or Groupings of Individuals) Within a Cohort and Within Various Income Groups? That is, Are Those in Similar Economic Circumstances Treated in Broadly Similar Ways? The question requires examination of both public pension programs and employer-sponsored pension plans.

It might be noted before proceeding that when a pension plan - public or private - defines a range of benefits, the benefit formula will lead to differences in the treatment of people who might reasonably be regarded as being in similar circumstances. Some of these differences are deliberately planned, while others may be unintended. Two people with equal pensions from the same plan, one of whom dies at age 70 and the other at age 90, clearly are treated differently; the latter receives a far higher return on his contributions to the plan than does the former. Few, however, would suggest that this difference in treatment is undesirable. Since people have different life spans, and pensions are normally designed to be paid until death, it is not only inevitable, but reflective of the purpose of a pension plan, that treatment will differ in this way. Of course, if a single pension plan contained an occupational group, say miners, whose mortality experience was consistently less favourable than that of the rest of the plan members, say supervisory and clerical workers, then such a difference in treatment might well be judged to be undesirable. The purpose of this section is to outline briefly the main examples of differences in treatment associated with public and private pension plans that may be regarded as inappropriate.

i) Public Programs. Five differences in treatment associated with the public programs are analysed here. The first involves a particular design feature that is common to the income-tested programs for the elderly - the GIS, the Spouse's Allowance (SPA) and the provincial top-ups. The second concerns the tax treatment of contributions to registered retirement income plans. The remaining three differences involve the C/QPP and arise principally from the way married couples are treated under those plans.

Income-Tested Programs and Assets. The GIS, SPA, and provincial top-ups are all income-tested. The assets of applicants are not taken into account in determining eligibility for these benefits. The fact that assets are ignored makes these programs easy to administer and avoids some of the stigma that is normally associated with means or needs testing.

However, this also means that equal amounts of assistance are provided to those in differing circumstances, and that people who are in similar economic circumstances may be treated very differently. Consider, for example, the difference in treatment between people in the two sets of circumstances discussed below:

- an elderly couple who receive two OAS cheques and own their home mortgage-free but have no other income; and

- an elderly couple who receive two OAS cheques, who recently sold their home, and who now receive \$3,000 annually in bond interest from investment of the capital received on the sale of their home.

The former couple receive a full GIS, which amounted to around \$2,400 in 1977. The latter have their GIS entitlement reduced by 50 cents for every dollar of investment income generated by their savings, and would thus have received only about \$900 in GIS payments in 1977.

About three-quarters of elderly couples own their own homes, as do a much smaller percentage of unattached individuals. Although data on the incidence of homeownership among GIS recipients are not available, it is likely substantial. Accordingly, this difference in treatment between people whose basic economic circumstances are not dissimilar creates a serious problem in the retirement income system.

RPPs, RRSPs, and DPSPs. Contributions by employees and/or employers to registered retirement income plans, RPPs, RRSPs, and DPSPs (Deferred Profit Sharing Plans) are deductible in computing income for tax purposes. However, the maximum amounts deductible in any one year depend on the specific circumstances of the individual's employment, in particular whether he is self-employed and, if not, the type of plan offered by his employer. There are several types of limits. The first are statutory annual contribution ceilings, as indicated in Table IV-4.

Table IV-4

Maximum Annual Income Tax Deductions Through Registered Retirement Vehicles for those in Different Employment Settings (Current Service Only)

Employment and Type of Coverage	Maximum Annual Contributions (\$)		
	Employee	Employer	Total
Self-employed, RRSP	5,500	n.a.	5,500
Employee, RRSP + RPP	3,500	3,500	7,000
Employee, RRSP + DPSP	5,500	3,500	9,000

Thus, employees whose employer has established a DPSP for them, can have set aside, on their behalf, up to \$3,500 more annually for retirement on a tax deferred basis than self-employed individuals, who can only take advantage of RRSP provisions.

A factor that can effectively change the numbers in Table IV-4 is the vesting rules for RPPs. An employee in an RPP is allowed a tax-deductible RRSP contribution of \$3,500 annually reduced by the amount of his RPP contribution. Therefore, if he contributes \$3,500 to his RPP, he is not allowed a tax-deductible RRSP contribution - the reason being that he is also assumed to be accruing pension benefits through his employer's RPP contribution. But if he leaves the RPP before his accrued benefits are vested, he effectively forgoes the employer contribution.

Consequently, for those years before he was vested, he has received a \$3,500 annual deduction only, well below the \$9,000 aggregate deduction that is feasible through membership in a DPSP and contributions to an RRSP. (DPSP vesting rules can also have effects of this type.)

The RRSP and DPSP contributions are also subject to a second limit; they may not exceed 20% of the employee's or self-employed person's earnings.

Thirdly, there is an administrative limit on the amount of benefits payable in respect of defined benefit RPPs. This latter limit is apparently used because of the uncertainty of employer costs in defined benefit plans. As noted in Chapter III, if rates of investment return, growth in wage scales, mortality experience, etc., turn out other than as estimated, large unfunded liabilities can be created and it would obviously be inappropriate for tax law to discourage employers from liquidating those liabilities. Consequently, employers can exceed the \$3,500 annual limit when they make payments for experience deficiencies; these are not subject to any limits. However, a defined contribution RPP, or an RRSP, which has had a very poor investment experience, cannot exceed the annual limits to compensate for poor experience in earlier years. In this sense, those in the defined benefit type of plan are treated better by the tax law. Furthermore, employees who buy past service coverage in their plan for the years in which they were not members of the plan may do so up to a second \$3,500 limit irrespective of their current contributions and any earlier RRSP contributions and RPP contributions under another plan. Such additional tax deferrals are not available to those with RRSPs.

Taking account of the possibility of employer contributions for past service deficiencies, and the buying back of past service by employees, the total annual deductions made in respect of an employee in an employer-sponsored defined benefit plan can easily climb to the \$10,000-\$15,000 range annually, whereas the employee in the defined contribution plan is restricted to the \$7,000 figure and the self-employed person with an RRSP to only \$5,500.

These differences in the extent to which individuals can make use of tax deferred saving for retirement arise because of the complexity and diversity of arrangements for retirement income, and the way in which the tax treatment of these arrangements has evolved. Nevertheless, these differences are difficult to justify.

Couples vs Singles. Under the C/QPP, contribution levels are independent of marital status but, as a result of the survivorship provisions, benefits are not. The benefits received in respect of an unmarried individual's contributions are, on average, smaller than those received in respect of a married person's contributions because widow's and widower's benefits are available to the surviving spouse of a married member only. Some regard this as a large enough difference in treatment to warrant corrective action. Some remedies to this problem that have been suggested include elimination of the C/QPP survivorship provisions, the retention of such provisions but with a reduction in the benefit entitlement of a married contributor, and the tying of contribution levels to marital status.

Chapter XVI explores this 'single/couple' issue. The view taken there is that the existence of survivorship benefits in the C/QPP does not constitute a serious inequity. Since the institution of marriage is widespread, and since changes in marital status can occur several times over any individual's lifetime, it seems reasonable to regard marital status at death in much the same way as the timing of death itself is regarded - as unforeseeable.

The C/QPP Survivorship Provision. When a person receiving a C/QPP retirement pension dies, a surviving spouse aged 65 and over becomes entitled to a survivor's pension equal to 60% of the deceased spouse's entitlement. If, however, the spouse of the person receiving the retirement pension dies, the pension is not similarly reduced. If a pension is regarded - legally or otherwise - as the joint property of a couple, then this difference in treatment is difficult to justify.

C/QPP and Work Outside the Labour Force. Only those with employment income (as defined in the Income Tax Act) can contribute to, and thus participate in, the C/QPP. Those who work but who receive no employment income - homemakers, other unpaid family workers, volunteer workers, etc. - are not eligible to participate in the C/QPP. This is regarded by some as a serious limitation of these earnings-related plans. While any individual is free to save for his retirement out of current resources, the argument is that the C/QPP have a character that is fundamentally different than that of personal savings. The degree of certainty of the pensions associated with these programs gives them special advantages - advantages that are available only to those with employment earnings. Since many of those who perform unpaid tasks outside the conventionally defined labour force are female, the restriction of the C/QPP contributory base to earnings as defined in the Income Tax Act has become one of a number of pension issues raised by those concerned about the status of women.

While, as noted, a policy discussion of pensions and women is not set out until Chapter XVI, two points might be made here. Firstly, virtually all of the elderly receive OAS benefits. The OAS payment is unrelated to earnings or labour force status - residence requirements constituting the only condition of payment. Thus, the larger the role given the OAS in the Canadian retirement income system, the greater the proportion of benefits from the system that would flow to those with no earnings histories, mainly women.

A second and related point to be noted is that legislation has been passed by the Quebec National Assembly and by Parliament that would allow a person with a child under seven in her or his care to drop the years of such care out of C/QPP pension calculations without reducing the ultimate entitlement at retirement. The QPP amendments are now in effect. The CPP amendment has not been proclaimed owing to the opposition of the Ontario and British Columbia governments. The provincial opposition apparently arose from a concern that the legislation would constitute a weakening of the earnings-related characteristic of the CPP - that is, the linkage between benefits and earnings would be eroded in a way that is inappropriate. Others opposed the amendment on the grounds that it would lead to undesirable results; only those women or men who were able

or willing to move into and out of the conventional labour force in order to care for children would gain advantage from the provision. Those who chose to remain outside of the labour force, or who were unable to enter it for economic or other reasons, would gain nothing. This point is related to a final criticism - that tying expansions of the drop-out provision to a particular activity such as child raising necessarily discriminates against those who spend portions of the age 18 to 65 period with no employment earnings as a result of time spent in job training and retraining, caring for elderly family members, or because of unavoidable occurrences such as unemployment and illness.

Thus, a troubling dilemma remains. Those without earnings are unable to participate in the C/QPP. They are denied access to a public pension plan which disburses pensions that are guaranteed by the state and indexed to the CPI. Yet if such access were granted, the earnings-related character of the C/QPP could well be weakened.

ii) Employer-Sponsored Pension Plans. Serious questions can also be raised concerning differences in the position of people under employer-sponsored pension arrangements. Within a single pension plan, members who have made equal contributions may be treated quite differently. Differences in treatment may vary between: (a) individuals with different earnings profiles; (b) those who are mobile and those who remain with one employer, the extent of the difference depending heavily on the period of a career spent in a pension plan; and (c) those who retire at different ages. In addition, differences of treatment occur among those in different plans.

Differences within Plans. Some suggest that it is not necessarily inequitable if members of a single pension plan are treated differently, provided that the 'total compensation' paid to employees for work of equal value is not significantly different. Thus, the argument runs, even though delayed vesting rules appear to penalize mobile workers - who tend to be young - in terms of pension entitlements, it does not necessarily follow that the mobile workers are actually being injured.⁽¹³⁾ Rather, it is argued, if vesting occurred earlier, the pension costs in respect of young members would rise and, therefore, the wages paid to them would be lower than otherwise. Consequently, under the earlier vesting rules, their total compensation would remain the same.

What is under consideration here is not whether this total compensation perspective is valid or not. Rather, it is whether employers ought to be free to configure their pension plans to satisfy their overall employee compensation objectives, or whether there should be limits on the freedom of employers in this regard. Two arguments favour the latter view. Firstly, it is by no means simple for an individual employee to understand how he is affected by the many detailed provisions of a pension plan. Since the issues involved are highly technical, the employee may lack the knowledge to see how his total compensation is affected by the design of a pension plan. Secondly, the tax deductions that are made available to encourage employer-sponsored pensions are

(13) It should be noted that the term mobility as used here includes not only individuals who shift jobs voluntarily, but also those whose mobility is involuntary - as in the case of layoffs.

aimed at improving the retirement income of Canadians. To the extent that such plans are used for other purposes - specifically to help the employer configure his compensation policy - the retirement objective is likely to be weakened. In any event, if the effect of separating the retirement pension from other items in the compensation package is to alter salary and wage scales, this will simply make clearer to employees the true value of compensation they are receiving.

With this perspective in mind, the three differences in treatment noted above are considered.

Earnings Bases. Some individuals have steep earnings profiles, meaning that their earnings rise sharply during their working years. Some white collar workers fit into this category. Other individuals have relatively flat profiles, the gradual rise in their earnings only more or less keeping up with wages in the economy at large. Many blue collar workers are in this group.

When individuals with different earnings profiles are in the same pension plan, and when that plan is of the final average or best average type, the individuals may fare quite differently in pension terms. Appendix 7 provides some examples illustrating the effect of different earnings paths of individuals belonging to the same plan throughout their working life. When the ratio of benefits to contributions is compared, the individual who has followed a typical 'steep earnings' path will be some 20% better off in pension terms than another person whose earnings have remained relatively flat because of the way in which benefits are calculated on final average or best average earnings.⁽¹⁴⁾ While they obviously vary with the relative steepness of the earnings profiles used for comparison, differences of this magnitude are not thought to be unusual. The differences are much less in the case of career average plans and do not occur in the case of defined contribution plans.

Since there is some evidence that those with steep earnings paths tend to have higher career earnings than those with flatter earnings profiles, final or best average pension plans tend to widen the gap in lifetime economic circumstances between individuals at different wage and salary levels.

The importance of these differences in actual situations depends on the extent to which earnings paths do differ, and the extent to which those with different earnings paths are grouped together in the same pension plan. There are no available data that would allow a precise assessment of these questions. Some employers have established different pension plans for white and blue collar workers - groups whose career earnings paths typically differ. On the other hand, more than half the members of pension plans are in plans of the final or best average type - the kind that can give rise to these differences in treatment. Accordingly, there are undoubtedly thousands of plans in which members with very different earnings paths are grouped together in this way. (The federal public service plan is a good example.)

(14)Appendix 7 indicates that the first individual in the final average plan receives some \$3.50 in benefits for each dollar of his own contribution; the second receives around \$2.90.

Final and best average plans not only cover a majority of pension plan members, but are also becoming increasingly popular. Employees correctly view them as a relatively effective way of protecting the real value of pension accruals against inflation during the pre-retirement period. It need only be noted here that plans can be designed so as to correct for inflation in the same way as those based on final and best average earnings and yet avoid what may be seen as rather unfair differences in treatment between different members of the same plan.

Tenure and Vesting Provisions. Under defined benefit schemes, the cost to the employer of the benefit an employee earns each year depends significantly on the number of years until retirement. If the employee is young, say 30, and the normal pensionable age is 65, the amount set aside to pay the benefit earned that year can accumulate interest for 35 years. If he is 64, the amount set aside earns interest for only one year and, therefore, must be several times higher than the amount for the 30-year-old. Indeed, in many contributory plans, the employee's own contributions, together with future interest earnings on the contributions, pay for the benefits earned until the employee is 40 years of age or older.(15)

Because of this feature of defined benefit plans, the period of the career spent in such a plan will significantly affect pension outcomes. Thus, for example, an employee who spends the first half of his career in a contributory defined benefit plan, and is not a plan member during the second half of his career, will receive fewer benefits per dollar of his contributions (when these values are compared on a present discounted value basis) than his colleague whose membership pattern is the reverse. When plan coverage is partial and/or vesting is less than full and immediate, this feature of defined benefit plans can lead to widely varying pension outcomes.

Take the case of three individuals whose earnings are the same throughout their career, as further elaborated in Appendix 7. The first, A, is in a career average plan for his entire working life. The plan calls for a 5% employee contribution and provides for vesting at '45 and 10' - that is, employees who are at least age 45 and have 10 years of service acquire a vested right to a pension payable on reaching the normal pensionable age in the plan. The second, B, spends the first three-quarters of his career in the same plan. He achieves vested

(15)A 2% unit benefit may, for example, cost 3% of the wages of a 30-year-old, while the same unit of benefit for a 64-year-old may cost some 20% of his wage. Under a plan requiring 5% employee contributions, the employer's pension costs for these two individuals would obviously be quite different: whereas he would have to contribute 15% of the older employee's wages, the contributions of the young employee of 5% would more than cover the cost of the pension benefits accrued in that year of 3%. This helps explain why it may make sense for a young employee leaving a contributory plan to withdraw his contributions rather than accept a deferred pension. The employee would, on average, fare better investing the money on his own. (Some of the pension benefits legislation attempts to ensure that the value of the deferred pension is not less than the value of the employee's contributions.)

status. For the last quarter of his career he moves to an identical plan where he fails to achieve vested status before retirement. He takes his return of contributions from this second plan and purchases an annuity which, in retirement, supplements the pension from his first job. The third individual, C, is the opposite of B in that he fails to achieve vested status in the plan where he spends the first quarter of his career, spending the last three-quarters of his career in a career average plan identical to the others, from which he receives a pension. In retirement, he receives his pension and the proceeds of an annuity purchased with the funds he received as a return of contributions from the first plan. Table IV-5 compares the benefits per dollar of contribution for the three individuals when there is no inflation, and when there is 3% inflation per year and the defined benefit plans are not indexed.

Table IV-5

Benefit per Dollar of Contribution for 45 and 10 Vesting and Where
Period of Vested Tenure in Plan Differs.

Career Average Plans, With and Without Inflation(1)

	Benefit per Dollar of Contribution (based on discounted values) (\$)	Benefit/Contribution Ratio Relative to Individual A
No inflation		
A (full career in plan)	2.65	100
B (vests/fails to vest)	1.99	75
C (fails to vest/vests)	2.50	94
3% Inflation, plans unindexed		
A (full career in plan)	1.45	100
B (vests/fails to vest)	1.03	71
C (fails to vest/vests)	1.55	107

(1)The use of final average plans in this example produces similar results.

The top half of the table shows that in the no-inflation case pension outcomes for mobile workers B and C are less favourable than for their colleague who did not move. If, however, the failure to vest occurs at the end of the career, as in B's case, the loss is much more substantial than if the failure to vest occurs at the beginning of the career.

The lower half of the table indicates that inflation damages the position of all three. A dollar of contribution by the long-service employee - A - then returns only \$1.45 in benefits (a decrease of 45% from the no-inflation case). B is even worse off. On the other hand, C, while also worse off than in the no-inflation case, ends up being relatively less affected by inflation than either A or B. C did not achieve vested

status in the early years of his career and thus was able to reinvest his contributions privately. A, on the other hand, was vested and his contributions to his unindexed career average plan during the early part of his career exceeded the amount required to buy the earned benefits.

There are two further points to note about the differences in treatment set out in Table IV-5:

- the mobility patterns assumed for individuals B and C are, of course, wholly arbitrary and substantially under-estimate the average degree of labour mobility in the economy. On this account, the differences between B and A and C and A are not indicative of the effect of mobility patterns in the real world on retirement income. Actual mobility data are presented in Appendix 8; and
- other influences work in the opposite direction - narrowing the differences shown in Table IV-5. Firstly, less than full and immediate vesting may be, to some extent, a substitute for steeper wage scales. In the absence of a pension plan, or where vesting is full and immediate, employers would perhaps have more steeply escalating wage/salary ratios. This would reduce the differences in the table. Secondly, the results in the bottom half of Table IV-5 most likely overstate the effect of inflation in real situations, since employers often make ad hoc adjustments to accruing pensions and to pensions-in-pay. It should be noted, however, that in practice the ad hoc adjustments that are made almost never apply to the deferred pensions of terminated employees.

Subject to these qualifications, which act in offsetting directions, the discussion above indicates that mobile workers - including those who change labour force status involuntarily - are almost certain to do less well in pension terms than those workers who remain with one employer. Mobile workers will frequently fail to achieve vested status within employer plans. When this occurs late in the career, the effect on the amount of the resulting pensions can be very large. It seems clear that such differences in treatment are inappropriate.

Early Retirement on Actuarially Unreduced Pensions. When entitlement to an unreduced pension benefit is made available to some employees at earlier ages than others, there is potential for the relative treatment of employees to differ substantially.

Consider, for example, the case of two individuals with identical earnings paths which are relatively flat, as more fully outlined in Appendix 7. One contributes to a career average plan for 30 years, from the ages of 25 to 54. The second also contributes for 30 years, but from the ages of 35 to 64. Each receives a benefit based on 60% of career average earnings with the first, of course, receiving the benefit for a longer period. In this example, the ratio of benefits to contributions for the employee retiring early is 32% higher than for the individual who retires on his 65th birthday. If the plan to which the individuals contribute is a final average one, the difference in the

benefits they receive is 47%. This comes about, of course, because the individual who retires early will draw benefits over a longer period, based on average life expectancy.

Even more striking differences arise if the individuals both have steep earnings paths. In this case, the difference in benefit-contribution ratios is 37% under a career average plan and 69% under a final average plan.

Some 550 plans in the country grant employees the right, when various age and service conditions have been fulfilled, to an immediate retirement benefit on an unreduced basis. In 1976, nearly 40% of all pension plan members belonged to these plans, indicating that they are among the largest in the country.

Conclusions. Although the examples above described several situations using hypothetical cases, the concerns they raise are not hypothetical. Few, if any, plans have full and immediate vesting and automatic adjustments for inflation. The wide range of vesting provisions, and the large variation in the way plans handle inflation, were noted in Chapter III.

Furthermore, it may well be the case that certain groups are more likely than others to be at a disadvantage as a result of these design features. Low-income workers likely change their status in the labour force more frequently than high-income workers. They are, therefore, less likely to be able to accumulate a significant number of years of pensionable service and are more likely to be ineligible for early retirement benefits. Similarly, women likely have, on average, flatter earnings profiles and accrue fewer years of pensionable service with each employer than men.

As a final comment, it might be noted that the three design features just discussed - final and best average earnings bases, less than full and immediate vesting provisions, and access for some to an actuarially unreduced pension benefit prior to normal pensionable age - play no part in the C/QPP. In the case of the C/QPP, pension benefits are based on an average of all pre-retirement earnings (subject to drop-out provisions), vesting is full and immediate, and there is no provision for early access to retirement benefits of any type.

Differences between Pension Plans. The preceding discussion described why individuals whose situations are similar, and who are members of the same employer-sponsored plan, may receive substantially different pensions.

The level of pension benefits varies also because of differences between plans that at first glance appear to be similar in terms of the contributions levied and the benefits paid. The well-being of pensioners within the employer-sponsored system is determined not only by the formal terms of their pension plans, but also by the treatment accorded them by current employees and employers. Three examples will illustrate this point.

Firstly, when a pension plan is introduced, the pensions paid to retiring employees usually take into consideration some or all of their service prior to the introduction of the plan. Part of these pensions are paid by the current generation - whether they be the shareholders of the firm concerned in the form of lower profits, the consumers in the form of higher prices for its products, or employees who forgo higher wages and salaries than an employer might otherwise pay.

Secondly, it is not unusual in the plans of large industrial employers for pension payments already being paid to retired employees to be increased at the same time and rate as the wages of other employees. In this case, the well-being of pensioners depends significantly on the productivity gains of the current employees, and on the view taken by them (or their unions) and by their employer, as to the appropriate sharing of these gains. The view of current employees is no doubt influenced by their expectation of similar treatment after their own retirement.

A third example is found within pension plans where the real value of pension payments is maintained under indexing arrangements at a higher level than is justified by rates of investment return achieved by the pension fund assets. In this case, the net additional costs may be borne by the current generation of shareholders, taxpayers, consumers, or employees.

These examples focus on those practices through which the well-being of pensioners is increased from what it might have been. Other practices can easily work in the opposite direction. The clearest example is probably the pension plan where pension payments are not adjusted at all for inflation. The higher interest earnings usually associated with an inflationary period will in that case reduce the employer's pension cost from what it would have been and these savings may accrue, wholly or in part, to the current workers through higher wages, to shareholders, to consumers or, indeed, to some combination of these groups.

Thus, pensioners who are in apparently similar plans can receive strikingly different treatment. These differences in treatment are very likely closely related to the varying financial circumstances of employers. The employer who offers a defined benefit pension plan can expect to experience unanticipated losses or gains as economic and demographic factors diverge from those that had been assumed. However, if costs rise, an employer which is also a government has among its options the possibility - however unpopular that might be - of raising taxes or, in some cases, simply entering credits in the asset side of the pension account, thereby acknowledging an additional debt on its own behalf. Employers with 'secondary access' to a tax base - for instance, Crown corporations and school boards - may also be able to pass these costs on by imposing higher rates for their services, such as hydro, or by negotiating additional grants from a more senior level of government. The ability of private employers to pass on unanticipated costs through price increases varies largely with the nature of the firm and the market in which it is selling. Those employers facing a highly competitive market, or more generally those who have little discretion over their pricing, may be less likely and less able to adopt plans that provide assurances that the real value of employees' pension benefits will be preserved.

It is difficult to document with precision the extent to which these differing characteristics of employers may account for differing treatment of pensioners in similar situations. However, it seems clear enough from evidence set out in Chapter III that, on average, public sector employers do the most to protect their pensioners. Some large private employers perhaps go as far; others go only part way. Smaller employers seldom endeavour to undertake such obligations.

Thus, at one end of the scale, there are arrangements that are essentially collective saving devices. Here are found the defined contribution plans typical of small firms and those defined benefit plans where the well-being of pensioners is, as in the defined contribution case, more or less related to the earnings of the funds that were set aside. At the other end of the scale are the plans offered by some governments and agencies, and by a few large corporations, where the well-being of the pensioners is related only distantly to current rates of investment return on pension fund assets. Here the pensioners' well-being is significantly affected by the attitudes of the younger generation of employees and their employers and by the capacity of these groups to facilitate the kinds of transfers to pensioners that are deemed appropriate. Seen from this perspective, some of the participants in the employer-sponsored pension system are provided with insurance against the risks associated with uncertain future economic events, including inflation. The concern, of course - and the concern is difficult to over-estimate - is that only some of the system's participants have such insurance; broadly speaking, the economic position of pensioners who formerly worked in the public sector or for some larger firms is protected far more completely than that of other pensioners. These differences in treatment are large. While it is the inevitable result of an employer-sponsored pension system based mainly on defined benefit plans and the widely varying economic power of different employers and different groups of active employees, it raises questions about the fundamental fairness of the system. The situation is unlikely to change in the absence of government action either to restrict the ability of employers and employee groups to favourably affect the incomes of pensioners, e.g. by indexing, or, alternatively, to ensure that all employers have the ability to do so.

Conclusions. Five differences in treatment associated with public pension programs were discussed above: the different impact of income-tested programs on those with similar incomes but with differing asset positions; the unequal tax treatment of people contributing to registered retirement income plans; the differing treatment accorded to the two marriage partners by the C/QPP survivorship provisions; the treatment of singles as compared to couples under the C/QPP; and the limitation of the C/QPP to those with employment income as defined in the Income Tax Act. The third and fifth of these listed differences affect women particularly.

In the employer-sponsored pension system, three of the problems relate to differences in treatment between mobile and stable employees within a plan, the differential in treatment resulting from the operation of final or best average pay plans and the provision of unreduced pensions

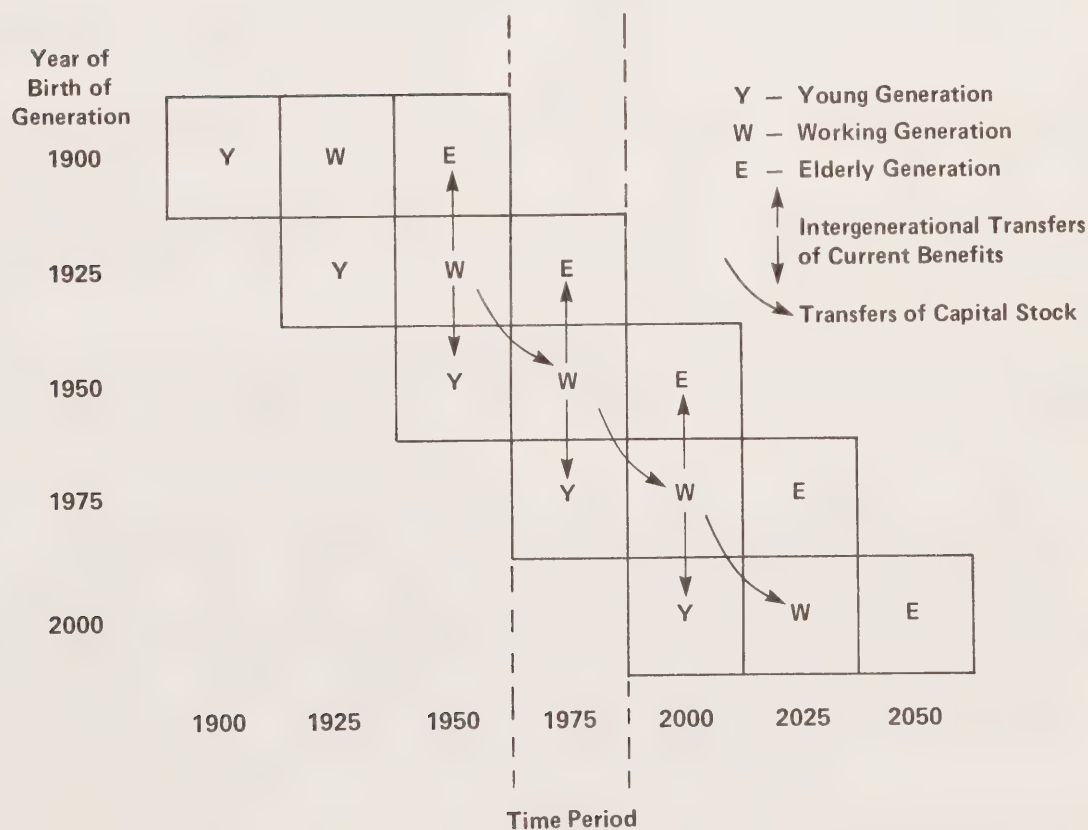
to those retiring prior to the normal pensionable age. These characteristics of the system are likely to be particularly unfair to plan members with low incomes and to plan members who are female. In addition, plan members can fare very well or very poorly depending on the nature of their employer, raising fundamental concerns about the equity of the entire system. Policy alternatives to deal with all these and related matters are considered in later parts of this report.

d) Fairness across Generations. The intergenerational perspective is the fourth and final one from which the fairness of the existing system will be evaluated. Only the OAS, GIS and C/QPP - that is, the nationwide public programs - are considered from this perspective. The issues here are difficult, there being no readily accepted definition of intergenerational fairness.

Figure IV-7 may help to outline the elements of intergenerational fairness. It illustrates the changing position over time of three generations: the young, the working generation and the elderly (Y, W, E). A generation ago, today's working generation was young, and today's workers will be elderly in a generation's time.

FIGURE IV-7

Transfers of Benefits and of Capital Stock
Between Generations



Many government social programs take the form of intergenerational transfers. Thus, as indicated by the vertical arrows in the diagram, taxes imposed on the incomes of the working generation provide public funds for programs for the benefit of the young and the elderly. The public education system and the OAS/GIS pension programs are two clear examples of such programs but, of course, there are many others.

The size and nature of the physical capital stock - roads, bridges, dams, buildings, plants, and all other capital facilities - that one generation passes on to the next (denoted by the curved arrows in the diagram), and the intellectual capital, are also of substantial importance in assessing whether one generation is fair to its successors.(16)

There is a relationship between the intergenerational transfer programs of governments and the size of the capital stock. If the capital stock passed on by one working generation to the next is, on a per capita basis, smaller in relation to the costs of such programs than the stock it received from the preceding generation, the new working generation will find the transfer programs to which it has been committed more burdensome. This comes about because the potential output of the economy is lower as a result of the relative reduction of the capital stock. Thus, it would be unfair from an intergenerational perspective, for example, for the current working-age generation both to vote itself higher pensions for its future retirement and, at the same time, to pass on to the next generation a smaller per capita stock of capital. (The possibility that the very existence of public pension programs may itself reduce national saving levels by increasing consumption and reducing investment and the future capital stock is a related but separate question that is discussed later in this chapter.)

As one working generation succeeds another, it can decide afresh both about the size and nature of public transfers it will effect and, in a much less explicit way, about the size and nature of the capital stock it will in turn pass on. Whatever a generation has inherited in the way of transfer obligations and capital stock will affect its decisions. But one generation cannot bind the next. A working generation that inherits relatively large pension obligations and a relatively small capital stock, on a per capita basis, can change the pension arrangements of the then elderly, since it can control the legislatures that will determine what pension policy will be.

Accordingly, it is in the interest of today's working generation to behave in a way that will enhance the probability that their pension expectations will, in fact, be honoured by the succeeding generation. Firstly, whether out of a desire to act fairly, or out of a concern for

(16)Indeed, it should be added that a complete discussion of intergenerational equity would involve a vast range of considerations, including such things as the condition of the environment and the state of knowledge one generation bequeaths to the next. It is apparent that a discussion of this kind would involve a range of considerations far exceeding the subject of this report.

self-interest, the working generation can pay the existing elderly the kind of pensions it wishes for itself. If this principle is followed by each successive working generation, then each is sure, if not of the pensions it will receive, at least that the size and nature of its pensions will reflect what the next working generation wants for itself. This procedure will automatically restrain the size of pensions one generation promises itself simply because it must pay for that same level of benefits for its existing elderly citizens. Secondly, the working generation will also wish to ensure that the capital stock that is passed on is not impaired. If it is, the future burden of the pensions it wishes for itself will be the greater and the probability of their full payment will be reduced.(17)

What relevance do these comments have for an assessment of Canada's public pension system from the perspective of intergenerational fairness? With respect to the OAS the relevance is clear and direct. When that program was introduced, the working generation provided to the then elderly the same benefits they promised themselves.(18) There is no evidence that the size of the capital stock ceased to grow at the time of the introduction of the OAS. While personal saving as a percentage of Gross National Product (GNP) fell in the 1950s from its immediate post-war levels, many other factors were at play. In fact, the level of gross savings as a percentage of GNP was maintained. The OAS, therefore, does not appear to raise any serious questions from the perspective of intergenerational fairness.

The case of the Canada and Quebec Pension Plans is more difficult to assess, in part because of differing perceptions of the essential character of these programs. Some hold the view that the C/QPP do not fit into the framework discussed above - that they are not essentially vehicles for the working generation to transfer income to the elderly. These observers would regard the plans as group saving devices, through which one generation pays into a fund from which that same generation's pensions are ultimately paid. According to this view, the C/QPP pensions paid to a particular generation are justified if the contribution rate paid by that generation, together with the anticipated earnings on their contributions, are sufficient to cover the pension liabilities being incurred on their behalf. This rate has been referred to in this report as the full cost contribution rate. Since current C/QPP rates are at levels below full cost rates, those holding this view recommend that those rates be increased so that the programs will be fair between generations. It is implicit in some formulations of this view that the current Canadian capital stock is not large enough and that 'full cost' C/QPP contribution rates are necessary to ensure that a capital stock of

(17) If, in beginning a public pension program, the consumption of the current elderly is enhanced, i.e. if the program does more than displace private transfers, it might well be argued that saving levels could appropriately be allowed to drop somewhat. In this case, the enhanced consumption of the current elderly would be 'paid for' by all future generations, in that the capital stock of the country would be forever somewhat smaller.

(18) It might be recalled, parenthetically, that while the relative size of the OAS in relation to AWS has fluctuated since its inception in 1952, it is now low in relation to its previous values.

'appropriate' size is put in place through investment that would be generated by such a method of financing. Indeed, some would even argue that it is necessary not only for current and future generations of contributors to pay for the full cost of their own benefits, but to pay also for the unfunded liabilities in respect of previous generations of contributors. What they propose, in effect, is full funding of the C/QPP.

The underlying premise in this view is that the existence of CPP and QPP funds has an effect on the size of Canada's capital stock. The economic evaluation in the next section, however, suggests that there may be little relationship. If this is the case, and there can be no certain answer, then the existence of such funds, regardless of their size, is not sufficient to satisfy concerns that the C/QPP be fair between generations.

An alternative view is that, in certain important respects, the C/QPP are similar to the OAS and other transfer programs - a major purpose being to transfer resources from current workers to the current elderly. To the extent that there are differences between the C/QPP and the OAS - the contributory nature of the C/QPP and the existence of funds in respect of them - it is argued that these differences reflect only a particular aspect of the C/QPP package. One part of the plan specifies what pensions are to be paid. Another part establishes the earnings base on which the contributions that finance the pensions are to be levied. Yet a third sets a tax or 'contribution' rate which, at least in the early stages of the life of the plan, is regarded simply as one of a set of instruments of government policy that can influence national saving levels. This view - that the C/QPP are more in the nature of a set of transfer and tax arrangements - clearly has a good deal of relevance. For example, when the C/QPP were begun the federal government proposed that the CPP be financed on a pay-as-you-go basis under which contribution rates would be set at the levels required only to pay current benefits. The Quebec government, on the other hand, argued for some funding - that is, for contribution rates that were, at least in the early stages of the plan, higher than necessary to pay for current benefits. A partial funding approach was subsequently adopted by each plan, with the result that they have accumulated funds to the extent described earlier.

For those who hold this second view of the C/QPP, intergenerational equity requires today's working generation to provide for a sufficient transfer of public and private resources to the current elderly to enable them to be as well off in relative terms as the current working generation would wish to be in its retirement. From this perspective, intergenerational equity also requires that the present working generation pass on an adequate stock of capital to the next.

At the time the C/QPP were introduced in 1966, their provisions did not apply to those who were already out of the labour force, and only limited benefits were available to those who were between 56 and 69 and in the labour force, because of phase-in provisions. As a result, a significant proportion of the current elderly are not eligible for C/QPP

benefits or only eligible for benefits at a reduced rate. Since a growing proportion of Canadians will become eligible for full benefits from these plans in the years ahead, it may very well be the case that the future elderly as a group will be better off financially than the current elderly, assuming that OAS and GIS benefit levels maintain their current position relative to average wages and salaries. This, in turn, raises concern with regard to equity between generations.

Such inequity as arises in this situation will be mitigated to some extent by the fact that while a higher proportion of the future elderly will have access to full C/QPP benefits than the current elderly, a smaller proportion of the future elderly will be eligible for benefits under the GIS and other income-tested transfer programs. Nevertheless, it is doubtful that any decline in the future role of transfer programs such as the GIS will come close to offsetting the relative increase in benefits that will be available to the future elderly as a group through the C/QPP.

If that is the case, those holding the second view above - that the C/QPP play an important transfer role - would have reason to be concerned on grounds of intergenerational equity. Since the future size of private transfers cannot be determined, the most that can be said is that - given the way in which the C/QPP were phased in - there is a presumption that the future elderly will be relatively better off than are today's elderly. This is the position adopted by this report and obviously argues strongly for improving the financial position of those who are now elderly in order to maintain equity between generations.

The second and parallel requirement for the achievement of intergenerational equity, and one that exists whether the transfers are predominantly of a public or private kind, is that the current capital stock be maintained at appropriate levels. The ease with which tomorrow's public and private pensions will be paid depends in part on the size and wisdom of today's investments. Calling for an appropriate capital stock has the ring of an empty statement. Even though it is difficult to define in precise terms what represents an appropriate capital stock, this does not reduce its relevance.

The fact that demographic patterns are changing raises a related question with regard to intergenerational fairness. The Canadian aged-dependency ratio, the ratio of those aged 65 and over to those aged 18 to 64, is expected to rise substantially over the next 50 years from its present level - which is low by international standards. While future aged-dependency ratios depend on the future birth rate, death rate, and migration patterns, it is well within the realm of possibility that the aged-dependency ratio will more than double within the lifetime of today's teenagers. (The total-dependency ratio on the other hand, i.e. the ratio of those under age 18 and those 65 and over to those aged 18 to 64, is expected to change only slightly.) As the proportion of the elderly in the total population changes, so too will the portion of future government budgets devoted to the public pension programs.

In considering the implications of these changes, it should be noted that this issue is not unique to public pension policy. In the absence of public pensions, demographic shifts would have effects on whatever institutions took their place. In a retirement income system based on the extended family, the average number of elderly per family would increase; their well-being would necessarily depend on the treatment the children chose to accord the parents. In a system based totally on household saving, the adjustments would occur through the capital markets as a relatively large group of elderly sold off their assets to a relatively small working generation.

But the question remains - given the existing public pension system, should special steps be taken now to meet the anticipated demographic shift? There is no clear answer. A higher fraction of future governments' budgets will have to be devoted to the future elderly than is now allocated to the current elderly. To increase the probability that these pensions will be paid, it could well be argued that today's working generation should be especially sensitive to the size of the capital stock it is passing on. Perhaps one key to the question of intergenerational fairness of pension arrangements lies in not permitting saving levels and capital investment to fall significantly below what they would have been in the absence of the public pension programs. If policy had this focus, it could well be argued that the kinds of adjustments that would take place as a result of the changing demographic pattern would not differ substantially from the adjustments that would occur if the retirement income system were more significantly based on household savings and care within the framework of the extended family.

3. The Retirement Income System - Its Economic and Institutional Impact. The third criterion for evaluating the Canadian retirement income system is its economic impact, including the impact both on the economy as a whole and on particular institutions or groupings within it.

The focus here will be on the nationwide public pension programs - OAS, GIS and C/QPP - and on the plans which make up the employer-sponsored pension system. In seeking to establish what the economic effects of these arrangements are, the alternative situation postulated is one where well-being in retirement depends upon prior saving and on intra-family and other non-government transfers. Thus, the analysis is focused on the effect of the institutionalization of retirement income arrangements.

a) Economic Effects. The discussion below is limited to a consideration of the effects of the retirement income system on per capita economic growth. It is set out under two headings. The first is the effect of the system on labour inputs into economic activity; the second is on capital inputs. Although the likely impact is noted in both cases, precise conclusions are not possible.

i) Labour Inputs. Labour inputs may be influenced by the extent to which institutionalized retirement arrangements affect the age at which people permanently leave the labour force. In a situation where well-

being in retirement depended on personal saving, and on intra-family and other interpersonal transfers, the range of ages at which retirement occurred would depend on a variety of factors. The wealthier the society, the greater the scope for personal saving and for transfers of all kinds; retirement age might be, on average, earlier than in a poorer society. Other things being equal, the health of the population would also likely be positively correlated with retirement age. Retirement ages would also be heavily influenced by employer practices.

The introduction of pension plans - public and employer-sponsored - into the system may have particular effects on retirement age. If so, these arrangements, in turn, could affect the supply of labour in the economy as a whole. The reason for this suggestion is straightforward. As documented earlier, the elderly tend to be relatively poor. Therefore, without the expansion of the public pension system, it is most unlikely that as many of those now over age 65 who have retired would in fact have been able to afford to withdraw from the labour force. However, no analysis is available on the size of the effect.

The evidence is imprecise regarding the effect that employer-sponsored pensions have had on retirement age. Some argue that the employer-sponsored pension plan is simply one of a number of tools of personnel policy and that the average age of retirement in the economy would be the same with or without employer-sponsored plans. Others maintain that an arrangement of a 'forced saving' character, that provides income at a particular age, is likely to lead to withdrawal from the labour force earlier than otherwise.

Given the present relatively modest role played on an economy-wide basis by employer-sponsored plans, and that relatively few employees earn large benefits, their effect on retirement age has probably not been large. However, some of the 'early retirement' provisions found in employer-sponsored plans in the automobile industry and the public service, for example, constitute an exception to this general presumption. Many of the provisions calling for actuarially unreduced pensions by right at ages earlier than the 'normal pensionable' ages are quite recent and their effect will not be clear for some time. This at least raises the possibility that the broad impact of such provisions on the average age at which people retire may be greater in the future than it is now.

These comments suggest that the existence of public and employer-sponsored pensions may together have reduced the labour supplied by those over, say, age 55, compared to what would have been supplied had personal saving, intra-family transfers, or other non-institutional arrangements served as the main source of retirement income. Whether national output is lower than it otherwise would have been depends on whether the labour supplied by other Canadians has offset any reduction in participation by those over age 55, and on the availability and substitutability of other inputs. In a period of substantial unemployment, such as the present, there is no short-run concern that pension plans may have reduced the supply of labour, though the potential exists for this factor to be more significant in the future as changing demographic

conditions bring about a decrease in the rate of growth of the labour force.

Besides being affected by the supply of labour, the level of national output is also affected by workers' productivity. In turn, this is related, among other things, to the ease with which workers move from one job to another. Barriers to mobility may well result in a less efficient economy than might otherwise exist. Earlier sections of the report have indicated that a person moving from one pension plan to another, or from a job with a plan to a job without one, is very likely to receive lower pension benefits - if he qualifies at all - than those who remain under a single plan. This is particularly the case for older workers. While it would not be surprising to find that these apparent barriers to mobility reduce overall labour productivity, no empirical evidence has been found which indicates that employer-sponsored pension plans have had this effect.

In summary, public plans - and perhaps also employer-sponsored plans - may well have had some influence on labour inputs. In the main, the direct effects have probably been to reduce labour force participation somewhat, although this impact may have been offset by other factors. Early retirement provisions in employer-sponsored plans are relatively recent; their future effects on labour supply are unknown, but may become significant. The effects of pension arrangements on labour productivity are also unclear, but are perhaps less significant than their impact on labour force participation.

Any government policy that reduced the present age of entitlement to public pensions would likely reduce the supply of labour directly, by inducing people to stop work earlier, although possibly the effect would be felt only with a lag. It could also act indirectly by creating pressures on employer-sponsored plans to adopt a lower normal pensionable age. The rate of growth of the labour force, and of the population of labour force age, is already slowing sharply and will continue to do so for some years. This suggests that governments should evaluate carefully the consequences of lowering further the age of entitlement to public pension benefits. This is especially so since, once established, the age of entitlement cannot readily be raised again - except perhaps very gradually - without interfering with what people considered their earned rights, and without weakening the intergenerational contract implicit in public pension arrangements.

ii) Capital Inputs. The retirement income system may affect the level and rate of growth of national output through its effect on investment. It was noted earlier that future generations will, to a significant extent, determine the size and nature of the pensions that will be received by the current working generation. Their decisions on the pensions to be paid will, in part, be influenced by the size and nature of the capital stock they inherit. If they find the capital stock 'too small' or of limited value, they may be less likely to share with the

elderly the consumption then available on the terms implied by the current pension arrangements. The quite legitimate current concern with the effect of pension promises on the capital stock stems partly from this consideration.

Two questions need to be considered here. Firstly, does the retirement income system, as now constituted, affect the size of investment flows, i.e. are the GNP and the size of the present capital stock significantly different from what they would have been had the well-being of the elderly been dependent only on private savings and private transfers? Secondly, has the allocation of investment funds and, therefore, the composition of the capital stock been affected by the present structure of the retirement income system?

The Size of Capital Stock. Table III-18 showed saving for retirement to be an important source of saving for the economy as a whole. But the effect of public and employer-sponsored pension plans on the level of total investment is currently the subject of much theoretical and empirical controversy. Given the multiplicity of forces at play, the difficulty of measurement, and the variation in the interpretation of results, it is exceedingly difficult to provide a definitive answer to the question: is the size of Canada's capital stock significantly different from what it would have been had the OAS/GIS/C/QPP and employer-sponsored plans not come into existence?

Retirement income is unquestionably one of the more important motives for a person to save. If the promise of a pension reduces household saving, and no other changes occur, overall saving in the economy will decline and the capital stock passed on to future generations will be smaller than in the absence of the pension system. But when pensions are fully funded, it is likely that the saving within the plan will more than offset the reduction of household saving. This is certainly the case in respect of those members of the plan who, in its absence, would not have saved privately. Even if the discretionary saving of employees declines as a result of membership in an employer-sponsored plan, it is also likely that saving associated with the funding of the plan will more than make up for the decline. Most individuals would not regard saving in an employer pension plan as a perfect substitute for private saving.

The conclusion from this line of reasoning, that the initial effects of employer-sponsored pension plans on personal saving levels are positive, has to be modified to the extent that the plans may be less than fully funded. Since, on average, some 30% of the liabilities of Canadian employer-sponsored plans are unfunded (on a going-concern basis) the presumption of a positive effect on personal saving levels is weakened.

Among those employer-sponsored plans in the public sector that do not follow the same funding rules as private employer plans, the effect on saving is even less certain. If, because of its pension

arrangements, a government's taxes are lower, or its expenditures higher than they otherwise would have been, the amount of saving in the economy - in the first instance at least - may be less.

These comments suggest that the effects of private employer-sponsored plans (and those public employer-sponsored plans financed in the same way) on household saving levels are likely not significant. The effects of other public employer-sponsored plans may well be negative, although views will differ on the size of any such downward effect. The overall effect of the employer-sponsored system on personal saving levels cannot, therefore, be judged with any degree of certainty.

Analysis of the effects on saving levels of public pensions - OAS/GIS/C/QPP - involves the same considerations. In the first instance, their effects may be expected to depend on the kinds of arrangements they replace, and on whether, if household saving falls as a result of these programs, saving is restored in the non-household sectors. Some economists (Martin Feldstein of Harvard University being a prominent example) have argued that the United States' Social Security system has displaced employer-sponsored pension plans and, hence, reduced both private saving and the size of the capital stock in that country. Others have countered that in the absence of Social Security, the capital stock of the United States would not differ greatly from what it is now. These observers contend that resources transferred from one generation to another by the Social Security Program simply displace, or institutionalize, intergenerational transfers on private account. If that were to be the case, the effects of public pensions on saving would be negligible.

It is quite possible that, insofar as 'first round' effects are concerned, the public programs in Canada have had a downward impact on personal saving levels. Some people are likely to have saved less than otherwise, given the existence of the OAS and given the fact that the benefit structure of many employer-sponsored pension plans takes account of the role of OAS and C/QPP. However, the effects of the income-tested programs on levels of personal savings are likely small, since they are directed towards the needy who are least likely to save in the first place.

In the case of the C/QPP, the excess between current levels of contributions and of benefits constitutes public sector saving. Studies suggest that, over the 1966-1975 period, the fall in personal saving that accompanied the introduction of the C/QPP - mainly associated with the integration of the contribution schedules of many employer plans with those of the C/QPP - was roughly balanced by increases in public saving.(19) This observation rests in part on an analysis which indicates

(19)The studies include an unpublished paper presented to the Federal-Provincial Sub-Committee on the Financing of the CPP in April 1978, Effect of the CPP/QPP on the Provincial-Local Government Sector, by V.K. Whitehead, Department of Finance; an unpublished study prepared for purposes of this report by E. Bower Carty, The CPP/QPP and the Provincial Sector, which is available on request.

that the C/QPP funds have been used largely by the public sector for investment, rather than to finance current consumption, though this point cannot be demonstrated conclusively. In any event, given the partially funded nature of the plans, the longer the contribution rates remain at their present level, the closer the C/QPP will come to having a pay-as-you-go character and the larger any first round negative effects on overall saving levels are likely to be.

The observations thus far suggest that the direct impact of Canada's public and employer-sponsored pension systems on saving levels in Canada has, if anything, been downward. But the emphasis has necessarily been on direct, initial or first round effects. Both saving levels and the size of the future capital stock will be determined by much more dynamic and complex processes.

It might have been expected, for example, that over the past quarter century - during which the principal elements of Canada's social security system were put into place - the ratio of personal saving to personal disposable income would have fallen. Instead, it rose successively from annual averages of 4.7% in the 1957-1966 period to 5.7% in 1967-1971 and to 10% in 1972-1978. A number of factors - smaller families, a changing age structure, higher real incomes, more uncertainty due to rising inflation and unemployment, and a wish to maintain values of financial assets at inflation-adjusted levels - all may have had an effect. Nonetheless, it is difficult to find evidence that personal saving levels have been independently affected by the social security system.

Moreover, households are not the only source of saving. Corporations also save, and the savings of non-residents may be drawn upon (although any resort to foreign savings entails a future liability for a share of production).

This leads to the question: what is the effect of private pension plans on the process of capital accumulation by private business? It is sometimes suggested that unsatisfied corporate demand for investment capital will bid up interest rates. Higher interest rates will in turn reduce the volume of investment that is potentially profitable and/or increase the desired flow of savings, until a new balance is realized. A reduction in household saving caused, for example, by an increase in pension promises will, from this viewpoint, reduce investment. One obvious criticism is that in conditions of less than full employment, a reduction in household saving must, in the short run, imply an increase in consumption and, hence, an increase in aggregate demand. And an increase in aggregate demand will over time generate an increase in investment. In current econometric models of the Canadian economy, the negative effect on investment of an increase in interest rates is typically

more than offset by the positive effect on investment of the increase in household consumption.(20)

Moreover, those who view any relationship between the capital stock and pension arrangements, however financed, as tenuous at best, note that overall saving rates and capital/output ratios in the economy show little tendency to fluctuate over time. They regard the process of private capital formation as being best understood as emanating from an inherent growth dynamic and from expectations about future profits - what Keynes called 'animal spirits'. Given a desire to invest, firms which are large can finance the investment out of their retained earnings, the adequacy of which can be assured if they are operating in oligopolistic markets. In other cases, firms may be able to borrow from financial institutions or from abroad. These investments, in turn, initiate a multiplier process which raises national income, and hence profits and loanable funds, thereby 'validating' the original financing requirements. It follows, then, that if business confidence is weak, all the household saving imaginable will not be sufficient to call forth real investment. The implication of this view is that the method whereby pension plans are financed is likely to be at most a peripheral issue from the viewpoint of capital formation.

With the data now available, and with conflicting theories on the determinants of growth in the capital stock, there is no persuasive evidence that the pension system has significantly altered the total amount of saving and the level of the nation's capital stock. This is not to say that future research may not provide such evidence, but simply to observe that the present data do not suggest a cause and effect. On the other hand, the pension system has undoubtedly affected the pattern of saving in the economy, the principal example being the shift from private to public saving brought about by the C/QPP.

The Composition of the Capital Stock. It was noted in Chapter III that saving for retirement purposes is a major reason for, and source of, savings in the economy. It was further observed that some 60% of retirement savings are used to finance the public sector, and that over one-third of the growth in public sector liabilities in the last decade has been financed by pension-type saving arrangements of one kind or another. Moreover, much of this financing for the public sector has been captive to the public sector and available at less than market rates. This is

(20)For example, in some recent simulations using the RDX2 macro-econometric model, alternative CPP contribution rates were examined. One led to an increase in interest rates of 0.24, 0.11 and 0.10 percentage points in the first to third years after the change, and at the same time to increases of 0.58, 0.85 and 0.86% in consumption in the three years. The net effects on private fixed investment were zero in the first year and amounted to an increase of 0.39 and 0.89% in the following two years. Thus, the stimulative effects of increased consumption outweighed the depressing effect of higher interest rates in all but the first year. It should be noted that these simulated results also implied changes in Canadian-U.S. interest rate differentials and imports, which in turn affected the exchange rate and price levels. Therefore, there is no simple or direct casual link between interest rates and consumption and investment.

true of the CPP loans to the provinces and of a number of provincial and municipal employee pension plans. In other cases, while market rates are paid, the financing remains captive. This is true of the federal government's use of its principal employee pension funds. In the last decade, largely due to the CPP, it has been the provincial public sector, however, that has relied most on captive pension arrangements of this type as a source of funding.

Some may consider that these factors have not been particularly significant in the determination of the size of the physical capital stock in the public sector - schools, roads, hydro-electric facilities, and so on - on the grounds that the relevant investment decisions were governed overwhelmingly by social, economic and political circumstances, and only incidentally by the financing arrangements. However, many are skeptical of this first view, pointing out that since the public sector capital formation associated with captive funds has not met a 'market test', the size of the aggregate public sector capital stock has grown more quickly than it otherwise would have and, consequently, is larger than would be the case if a market test had been required.

The C/QPP and employer-sponsored pension plans also appear to have led to a greater concentration of economic power than would have occurred had retirement arrangements been less institutionalized. A few governments and a relatively small number of trustees control the great bulk of the \$70 billion in financing generated by the C/QPP and employer-sponsored plans (Table III-19). Concentration of this kind may well have led to composition of capital stock that is quite different than that which would exist if control of pension assets had been more widely dispersed.

The preceding paragraphs suggest that it is difficult to arrive at precise conclusions with respect to the effect of pension arrangements on the size and composition of the capital stock. Virtually any statement or empirical evidence on this subject can be challenged. But even if it had been possible to show definitively that the size and broad composition of the capital stock had been unaffected by pension arrangements, it still could not be concluded with certainty that the pension claims of the current working generation are secure.

The nature of the capital stock will also influence the views of future generations as to its usefulness. Many factors will influence the value (both in dollar terms and in the broader sense) of the capital stock inherited by future generations. Large changes in relative prices may well be significant. For example, higher prices for petroleum will reduce the value of that part of our social and economic capital which is heavily oriented toward the automobile. More generally, it is now increasingly recognized that market forces may 'incorrectly' price items like clean air and water and non-renewable resources. To the extent that this cost is not taken into account in investment decisions made today, the resultant capital stock could well be viewed by future generations as having a lower value than is now anticipated by the current working generation.

Questions of this kind are, of course, well beyond the boundaries of pension policy. Indeed, they go to the heart of the question of how society organizes its productive capacity and directs its future growth. These comments, however, suggest that any discussion of the effect of pensions on saving runs the risk of being too narrowly based. Analyses which suggest that 'more investment is needed' or that 'current investment is adequate' may well neglect, or deflect attention from, the essential question of how a society should arrange to provide itself and its successors with the appropriate amount and kind of capital stock.

b) Institutional Effects. Governments, employers, pension plan members and pensioners are the principal institutions and groups making up the retirement income system. This section seeks to evaluate the differing economic impact of the retirement income system on those institutions and groups. Apart from a brief mention in Appendix 14, this report does not discuss the effect of the increasing ownership of the equity of Canadian corporations by pension funds, nor does it examine the effect of the retirement income system on Canada's financial institutions. While these issues are important, they merit separate study in their own right.

i) The Impact on Government. The report has already underlined the large role that governments play in the retirement income system through the OAS, GIS, C/QPP, SPA, and the various provincial supplementary assistance programs. Since the proportion of the elderly in the population as a whole is expected to increase substantially in the foreseeable future, the adjustments associated with such a demographic change will have a substantial impact on the public pension programs.

Table II-1 reflected an estimate of the extent of the future change in the age structure of the population based on one of the Statistics Canada population projections. This particular projection was adopted not because it was considered to be the most probable, but rather because it was unlikely to under-estimate the effects of changes in demographic patterns on the costs of operating the pension system.

That table indicated that the aged-dependency ratio may more than double over the 1976-2031 period, moving from 14.4 to 32.0% of the working-age population, with most of the change occurring during the second half of the period. Total-dependency ratios - which take into account those under 18 as well as those over 64, and which are, therefore, more indicative of the ratio of non-productive to productive elements in the economy - move quite differently. They decline between 1976 and the first decade of the next century and then climb to just under the 1976 ratio by 2031.

Table IV-6 provides estimates of how these projected changes in demography will affect government expenditures. The figures in the table were developed on the basis of a large number of assumptions. Accordingly, the results should only be interpreted as indicative of directions of change and of very rough orders of magnitude.(21)

Table IV-6

Effect of Projected Population
Changes on Expenditures of Governments

Group	Government	1976	2001 (% of GNP)	2031
Age-specific expenditures on those aged 65+	federal	3.2	3.3	5.7
	provincial	1.3	1.5	2.7
	local	0.2	0.2	0.4
	C/QPP	0.4	2.1	4.3
Total		5.0	7.0	13.1
Age-specific expenditures on those aged 0-17	federal	1.4	1.0	0.9
	provincial	4.2	2.8	2.7
	local	1.5	1.0	0.9
	C/QPP	0.1	0.1	0.2
Total		7.2	4.9	4.7
All other expenditures	federal	15.8	14.8	15.0
	provincial	9.2	8.3	8.5
	local	2.9	2.7	2.8
	C/QPP	0.2	0.5	0.7
Total		28.1	26.3	27.0
Totals	federal	20.4	19.0	21.7
	provincial	14.7	12.6	13.9
	local	4.5	3.9	4.1
	C/QPP	0.6	2.7	5.2
Total		40.2	38.2	44.8

Note: Numbers may not add due to rounding.

(21)The table indicates how the cost of government programs in operation in 1976 would be affected by changes in the age structure of the population expected by 2001 and 2031, assuming maintenance of the existing per capita levels of services and expenditures in real terms. Age-specific expenditures cover not only expenditures on age-specific programs (e.g. OAS) but also expenditures on other programs (e.g. hospital care) which are used much more heavily by some age groups than by others. The levels of expenditure at various future dates were then expressed as percentages of Gross National Product. Further details on methodology are contained in Appendix 16.

While the projected total-dependency ratio in 2031 is roughly what it was in 1976, the young are expected to make up a much smaller proportion of the total population than they do today. Expenditures under government programs on the young were substantially lower on a per capita basis than those on the elderly. If this approximate relationship continues to apply in the future, government expenditures on dependent age groups as a proportion of GNP will tend to increase as the proportion of the elderly in the population increases, despite the relative stability of the total-dependency ratio.

The data in Table IV-6 portray the 'pure' demographic effects on government expenditure patterns. It might be noted that the outcome in terms of expenditures as a proportion of GNP applies regardless of economic growth if levels of service per capita increase at the same rate as economic growth per capita.(22) Under this scenario, then, total government expenditures as a percentage of GNP rise from 40.2% in 1976 to 44.8% in 2031. However, it should be noted that there is a decrease during the period from 1976 to 2001. All of the projected increase occurs in the following 30 years.

The figures in the table indicate that between 1976 and 2031, federal expenditures on the elderly (other than CPP) as a proportion of GNP will increase from 3.2 to 5.7%. At the same time, however, the analogous expenditures by other levels of government will double, rising from 1.5 to 3.1% of GNP. As the table also indicates, however, these increases will be offset to some extent by a relative decline in expenditures related directly to those up to 17 years of age. Federal expenditures during this period on programs other than the CPP for all ages of dependency will rise from 4.6 to 6.6% of GNP between 1976 and 2031, while similar expenditures by provinces and municipalities will decline from 7.2 to 6.7%.

The share of GNP absorbed by the C/QPP will increase in the future for two reasons. The first is that the process of phasing in the C/QPP will continue to affect the figures until after the turn of the century. Secondly, the share of C/QPP expenditures will grow as a result of the increase in the aged-dependency ratio; the impact of this development will account for most of the increase in C/QPP expenditures after 2001.

(22)The outcome also applies if economy-wide productivity gains add correspondingly to the cost of government programs even if there is no increase in the levels of government service per capita. The costs of programs held at constant levels of per capita service would rise to the extent that the real wages and salaries paid to those providing them grow faster than their productivity. Some programs, such as the C/QPP, are linked to the economic aggregates and their costs rise automatically with general productivity. The scope for productivity gains to moderate the effect of projected population changes on expenditures of governments is accordingly limited.

The total burden on those of labour force age of supporting the young and the old is not fully reflected by the data contained in Table IV-6 because it excludes age-related expenditures which are not borne by governments. A higher proportion of the costs of supporting the young is paid for privately than that in the case of the elderly. To some extent, therefore, the future increase in relative cost of providing support to the elderly through public programs may be offset by a decline in private family costs of supporting children. Nevertheless, the central message remains unchanged: a greater share of economic output will flow to those who are elderly by the year 2031 than is the case today.

What then can be concluded about the effect on government of the institutionalization of retirement income arrangements? Firstly, other things being equal, government expenditures as a proportion of GNP will rise moderately. In turn, this will require increases in rates of taxation or in pension contribution rates. It is worth repeating that the burden on those who finance governments - that is, the taxpayers - would not necessarily be smaller if retirement income arrangements were not institutionalized, but the vehicles through which they would cope with these responsibilities for the elderly would be somewhat different.

Secondly, it can be concluded that the institutionalization of retirement income arrangements puts an important responsibility on governments to plan and to manage effectively the process of redirecting resources from the young to the old. Also, since provincial governments have a relatively larger responsibility for the young than does the federal government, whereas the federal government has a relatively larger responsibility for the elderly than the provinces, it appears likely that over time - again other things being equal - there will be a need to have a somewhat higher proportion of tax revenues flowing to the federal government and a smaller proportion to the provinces.

ii) The Impact of the Pension System on Employer Costs. The pension system affects costs of operating a business in several ways. Through income and other taxes they pay, businesses help to finance the OAS, GIS, SPA and provincial supplementary assistance programs. In addition, all employers are required to pay a payroll tax equal to 1.8% of covered earnings to help finance the Canada and Quebec Pension Plans.

Although the matter of costs is dealt with more fully in Chapter XII, it is worth noting here that, in general, the effect of public pension programs on employer costs is somewhat lower at present in Canada than it is in the United States - Canada's chief competitor in the Canadian and foreign markets. The reasons for the lower Canadian costs are varied. Firstly, the United States Social Security system is somewhat larger than its Canadian counterpart (OAS/GIS/C/QPP). Secondly, it has been in operation much longer than the C/QPP, with the result that there is a higher ratio of beneficiaries to contributors in the United States program than there is in the Canadian plans. And, thirdly, there is a slightly higher proportion of elderly citizens in the United States than in Canada.

Table IV-7 shows the direct costs in 1976 to employers in the commercial sector for public pension programs in Canada and the United States as a percentage of gross payroll of all such employers. To provide a basis for comparison, it also shows the direct costs to employees of contributions to public pension programs as a percentage of payroll. It is not possible to determine the extent to which the costs of such general public pension programs in Canada as OAS, GIS, SPA and provincial supplements are borne by firms, but since such costs are significant they are shown on an unallocated basis as a percentage of payroll to provide a more balanced perspective.

Table IV-7

Aggregate Direct Costs to Employers and Employees in the Commercial Sector of Public Pension Programs in Canada and the United States, and Unallocated Costs, 1976

	Canada	United States
	(% of gross payroll)	
Direct employer contributions	1.0	4.3(1)
Direct employee contributions	<u>1.0</u>	<u>4.3</u>
Total direct employer-employee contributions	2.0	8.6
Unallocated costs as a percentage of payroll	4.1	0

(1) Includes old age and disability insurance, but excludes hospital insurance.

Source: Canadian data in Tables IV-7 and IV-8 were derived from Labour Costs in Canada, 1976, Statistics Canada. The United States data were derived from Employee Compensation in the Private Non-Farm Economy 1976, U.S. Bureau of Labour Statistics. The U.S. data were adjusted for purposes of this report, by eliminating the cost component of the United States Social Security program covering hospital insurance. The Canadian data were adjusted to include the Canadian programs financed out of general revenues. Direct employee contributions were added in both cases.

Table IV-8 shows the costs to commercial sector employers and employees in Canada and the United States of employer-sponsored pension plans.

Table IV-8

Aggregate Costs to Employers and Employees in the Commercial Sector of Employer-Sponsored Pension Programs, Canada and the United States, 1976

	Canada	United States
	(% of gross payroll)	
Employer contributions	3.3	5.1
Employee contributions	<u>1.5</u>	<u>0.4</u>
Total employers and employees	4.8	5.5

Source: See Table IV-7 source.

Table IV-8 shows that employer costs of employer-sponsored pension plans averaged 3.3% of gross payroll in the commercial sector - the sector which has been singled out as the most relevant in relation to Canada's international competitive position. As seen in Chapter III, there is a wide variation in employer costs.

Taking public and employer-sponsored plans together, and assuming half the unallocated costs in Canada are paid by employers, employer pension costs in Canada averaged a maximum 6.4% of payroll in 1976, whereas the United States figure was 9.4%. (23)

The Cost Uncertainties Surrounding Defined Benefit Plans. The pension costs of employers who provide defined contribution plans are readily determined. Once annual contributions are paid, the employer's obligations have been fulfilled in respect of any given year. But the costs of employers who sponsor defined benefit plans are quite variable and are affected by two important factors that deserve special attention - long-term secular change and short-term volatility. The discussion that follows examines the nature of the difficulties that are created for employers by these factors, particularly as they are affected by inflation.

The cost of a defined benefit plan depends on a number of economic and demographic variables. If these variables turn out in actual practice to be different than had been expected, pension costs will deviate from anticipated levels. Differences of this kind are characterized by the term uncertainty of pension costs. Such uncertainty characterizes pension plan costs whether or not contributions to a plan are made in advance of the time benefits are disbursed - that is, regardless of whether or not the plan is funded.

(23) Some of this differential is temporary. An estimated 1.6 of the three percentage points of difference reflects the relatively short period during which the C/QPP has been in effect, and the currently higher aged-dependency ratio in the United States than in Canada. An estimated 2.5 percentage points of continuing differential, after projected increases in U.S. costs which are very roughly estimated at 1.1 percentage points, reflect other variations in the two systems, such as the size of benefits, coverage and rates of investment return.

When actual economic or demographic experience departs from the assumptions on which a funded pension plan has been based, the differences in costs resulting from this divergence may reflect either the short-term volatility of particular economic factors, or long-term secular changes in those factors. Both for analytical and practical purposes, the distinction between the two types of explanations for this divergence is important, even though, in the event, an observer could be hard-pressed to ascertain whether the divergence is due to short-term or secular considerations.

An example from outside the pension field may help to clarify the difference between secular change in costs and volatility of costs. On January 1, 1979, 'A' enters into a contract to pay 'B' \$100 in 40 years time. 'A' decides to 'fund' this obligation by making equal annual payments into a bank account, which on January 1, 1979, offers 3% interest. 'A' calculates that if the interest rate remains at 3% per annum, annual payments of \$1.33 for 40 years will produce the required \$100. There is, however, no guarantee that the one variable that matters - the bank interest rate - will remain at 3%. If, halfway through the 40-year period - in 1999 - the interest rate falls to 2% and, at that time, 'A' assumes that the reduction is a secular change, his annual payments to the account must rise to \$1.94 to compensate for the deterioration in the interest earned on the money in the account. If, in fact, the interest rate behaviour corresponds to 'A's expectations and remains at 2% for the remaining 20 years, at the completion of the contract period, 'A' can look back over the 40 years and regard the extra annual payments of 61 cents in the second half of the period as a result of the secular change in interest rate values - the cost of which he had to bear.

Consider the same example, changed only in that the fall in the interest rate from 3 to 2% in 1999 is considered by 'A' to be temporary, i.e. he still regards the 3% interest assumption as appropriate for the long term. In that case 'A' would need to make extra payments each year in order to maintain the balance in the bank account at the originally planned-for levels, which is to say at levels reflecting a 3% annually compounded rate. In the year 2000, this would require an extra payment of 35 cents. If the interest rate remains at 2% for another year, an extra payment of 38 cents would be required in 2001, and so on.

If, on the other hand, the opposite situation obtained for the next two years, that is, that interest rates increased to 4%, which increase was regarded as temporary, annual payments would be some 40 to 45 cents below the expected \$1.33 level. If the interest rate returned to the 3% level after these deviations, annual payments would rise back to the \$1.33 level. Under these circumstances 'A' could look back after the contract had been completed and regard the two extra payments in the 35-38 cent range and the savings in the 40-45 cent range as resulting from a temporary deviation of experience from assumptions; these extra payments and savings are examples of the effect of cost volatility.

Secular Change and Cost Uncertainty. Pension plan costs are characterized by uncertainty because the cost calculations are based on estimates of

the future level of a number of important economic factors and on projections of demographic change. For a plan where benefits are linked to employee wages and salaries, and where funding occurs, the estimated cost of the plan as a percentage of payroll will depend on the rate of growth of those wages and salaries, the rate of return earned on the pension assets, the years of service the employees accrue, their mortality experience, and so on. Table III-17 provided examples of how costs will differ if there are changes in the estimates of some of these economic variables. It was shown there that even small changes in some variables - particularly the rate of return on pension assets - could lead to substantial changes in cost. No data are presented here on actual changes in the economic variables that could be regarded as measures of the magnitude of the uncertainty associated with pension costs. The very difficulties involved in providing such data underline an important point. It cannot be known with certainty, for example, whether the generally low, inflation-adjusted rates of return earned on pension fund assets during the last several years are a passing phenomenon, or an indication of a new environment to which permanent adjustment should now be made.

If, over the longer term, the rate of return on pension fund assets adjusts to take account of inflation, but the benefits of the plan are not similarly adjusted, the pension costs of an employer will be lower than otherwise would be the case. The position of the pensioners is then similar to that of lenders, who invariably are damaged by inflation if they are not able to take advantage of upward adjustments in interest rates. There is, however, evidence that when the rate of inflation is rising, inflation-adjusted rates of return on investment tend to fall, and vice versa. If the periods of rising and falling inflation do not balance out, as may well be the case, then the average inflation-adjusted rate of return may be lower than anticipated by the employer. In these circumstances, an employer's costs may be higher than expected if his plan provides for the payment of indexed benefits. In other words, the normal uncertainty with respect to future rates of investment return and rates of wage and salary growth, which help make pension costs uncertain, are exacerbated in periods of changing rates of inflation. When a pension plan is unindexed, the burden of the uncertain economic climate is borne by pensioners, who cannot be sure whether, and to what degree, their pensions will be adjusted for inflation on an ad hoc basis. When a plan is indexed fully for inflation, the burden falls on the employer, who cannot be certain whether, to what degree, and when, investment returns will adjust for inflation.

Thus, it is natural that pension plan members and pensioners will seek to have their pensions indexed fully for inflation, whereas employers will prefer not to commit themselves to adjust pensions automatically to keep up fully with the CPI. Employers offering defined benefit pension plans face uncertain costs and the uncertainty increases if they agree to index their pension payments.

Pensioners and those who speak for them are, of course, reluctant to accept the employer's perspective. They point out that while the benefits of the pensioner are being eroded by inflation, many employers

are able to sell their goods and services at higher prices and that the wages and salaries of their employees frequently rise at a faster rate than the cost of living.

Pensioners may argue also that lower than expected inflation-adjusted rates today are likely to be offset by higher than expected rates tomorrow. Even if this were not the case, they might contend that the employer's undertaking to offer a defined benefit pension plan entails a moral obligation on his part to keep the value of the pensions associated with the plan constant in real terms.

This dilemma exists because the costs of pension benefits accrued today cannot be known today - their costs are uncertain - and because the purchasing power of unindexed accrued pensions is similarly unknown, depending ultimately on future rates of inflation. In these circumstances, both the employer and the pensioner wish to minimize the uncertainty confronting them.

In summary, if inflation-adjusted rates of return, mobility rates, mortality rates, and rates of growth of wages and salaries permanently differ from those expected (as a result of inflation or, indeed, for any other reason), costs of defined benefit pension plans will deviate from expected levels. Since these variables are inherently difficult to predict, there is a good deal of uncertainty associated with the costs of such plans.

Cost Volatility. If the economic and demographic variables that determine the estimated cost of a defined benefit pension plan even temporarily depart from their assumed long-run levels, surpluses or deficits are recorded in the pension fund concerned. If there are surpluses, employer contributions to the pension plan are reduced; if there are deficits, they are increased. These fluctuations in costs are referred to as cost volatility. While fluctuations in demographic variables may well give rise to such surpluses or deficits, more attention is normally focused on rates of investment return and on the rate of growth in wages and salaries because when experience departs from assumptions in respect of these two factors, greater fluctuations in costs can result.

The rate of investment return, and the rate of growth in wages and salaries, are particularly sensitive to the level of inflation, and its rate of change. Table IV-9 which utilizes data on Government of Canada bonds with a long term to maturity suggests, for example, that the inflation-adjusted rates of return earned on these bonds tend to be inversely correlated to the rate of change in the level of inflation. In other words, the annual rate of return, after adjustment for current inflation, tends to rise when the rate of inflation is dropping and to decline when the rate of inflation is rising. The table indicates that negative inflation-adjusted rates of return are frequently experienced when the rate of inflation is increasing rapidly.

Table IV-9

Nominal and Inflation-Adjusted Rates of Return on Long-Term
Government of Canada Bonds (1937-1978) Classified by
Changes in Annual Rates of Inflation

Change in Rate of Inflation(1)(2)	Number of Years	Mean Nominal Rate of Return(2)	Mean Inflation- Adjusted Rate of Return(2)
			(%)
Percentage points			
More than -3	5	6.2	3.8
-3 to -2	1	2.4	3.2
-2 to -1	4	6.5	4.2
-1 to 0	8	1.3	-2.6
0 to 1	9	4.1	0.7
1 to 2	8	2.8	-0.4
2 to 3	2	0.0	-9.2
More than 3	5	3.0	-3.8

(1) An annual inflation rate of 6% following a year with an inflation rate of 3 1/2% would cause the rates of return for the next year to be entered in the 2 to 3% line.

(2) The calculations are on an annual average rate basis. For details, see Appendix 10.

The table shows the experience over a 42-year period (1937-1978) of rates of change in inflation in one year and the average nominal and average inflation-adjusted rates of return in the following year. The rates of return are calculated on the assumption that a security is purchased at the beginning of a year and sold at the end, with the result that the rate of return calculation takes account of both the rate of interest received and of any changes in the capital value of the security over the 12-month period. The first line of the table indicates, for example, that in 5 of the 42 years the rate of inflation (as measured by the CPI) declined from its level in the previous year by more than three percentage points (declines being depicted by a minus sign). The average nominal rate of return in the succeeding years following an inflationary decline of this magnitude was 6.2% and the average inflation-adjusted rate of return was 3.8%. At the other end of the scale, there were five years in which the rate of inflation increased by more than three percentage points. After taking account of the interest received and the decline in value of the asset due to the impact of rising interest rates on the prices of outstanding bonds, the average rate of return in the following years was 3.0% and the average, inflation-adjusted rate of return was -3.8%.

The impact of changes in the rate of inflation on the inflation-adjusted rate of return on other classes of fixed-income securities is broadly similar.

While Table IV-9 shows wide fluctuations in inflation-adjusted rates of return, it cannot be concluded that these fluctuations produce an analogous degree of volatility in employer costs. If the same method as that employed in the tables were followed in valuing pension assets, very large deficits and surpluses would be created regularly. The likelihood of this happening is reduced by two circumstances. Firstly, pension fund assets are usually valued by actuaries in ways that tend to smooth out erratic value changes. Secondly, the regulatory framework permits the smoothing of the additional costs associated with experience deficiencies. In the simple 'bank account' example cited previously, the deficiency arising from a 2% rate of interest in one year, rather than the 3% rate that had been assumed, was calculated to be some 35 cents. In the example, all of this amount was paid into the account immediately. In the case of pension plans, when an experience deficiency of this type is revealed, it may be written off over a number of years, thus smoothing the effect of the deficiency on employer costs.

Since the actuarial practices and the regulatory environment tend to smooth out abrupt changes in cost arising from the divergence of experience and assumption, it is difficult to determine the extent of cost volatility faced by employers. The most that can be done here is to note the magnitude of the underlying factors that tend to create the volatility. Since the early 1970s, for example, the rate of growth in wages and salaries has exceeded the expectations assumed in most pension plans, while rates of investment return (after adjustment for inflation) have declined sharply.(24) Table IV-10 sheds light on the latter factor - investment experience. The table provides data on the actual market experience of pension funds in Canada over an 18-year period. This indicates that the inflation-adjusted rates of return achieved by Canadian pension funds - including the calculated changes in asset values - fell dramatically during the 1973-1978 period. From median inflation-adjusted real rates of 3.7 and 3.6% in the two previous six-year periods, the median inflation-adjusted rate fell to a startling -3.2% in the 1973-1978 period.

(24)W.R. Waters, Pension Costs and the Competitive Position of Canadian Firms. A study commissioned by the Economic Council of Canada.

Table IV-10

Investment Performance of Trusteed Pension Funds, 1961-1978

	1961-1966	1967-1972	1973-1978	1961-1978
	(compound annual average inflation-adjusted rates of return)			
Actual pension fund investment results at				
a) First quartile break	4.9	6.2	-1.6	3.1
b) Median	3.7	3.6	-3.2	1.3
c) Third quartile break	2.6	1.5	-4.9	-0.3

Source: Data provided by Wood Gundy Limited converted to inflation-adjusted rates on a year-end basis as described in Appendix 10.

Declines of this magnitude in the inflation-adjusted rate of return cannot help but have led, even with the use of the smoothing techniques noted above, to marked increases in employer pension costs. (Chapter III provided some indication of these increases.) What is not clear is whether these increases are indicative of a new situation typified by lower inflation-adjusted rates of return or whether higher returns in the future will offset the poor performance of the mid-1970s. A study for the Economic Council, cited above, suggests that the latter circumstances may be the more likely. Only future experience, however, will indicate whether the poor performance of the mid-1970s is evidence of cost volatility, or of a secular rise in costs. In the meantime, employers have no choice but to finance these added costs.

The Incidence of Pension Costs. As a consequence of research conducted in the United States⁽²⁵⁾, the prevailing view in economic analysis concerning the incidence of payroll taxes, such as those used to finance the C/QPP and Unemployment Insurance, is that employees tend ultimately to bear much of the cost of their employer's payroll tax - as well as their own. In other words, employers tend to be able to shift the costs of their taxes on to their employees by providing their employees with less compensation than otherwise would be the case. It is likely the case that the ultimate incidence of employer contributions to employer-sponsored pension plans is similar to that of payroll taxes - that is, they are borne to a substantial degree by the employees. However, the volatility in employer pension costs may make this 'backward' shifting of costs on to employees somewhat less systematic.

(25)Brittain, J.R., "The Incidence of Social Security Payroll Taxes", American Economic Review, vol. 61 (1971); and The Payroll Tax for Social Security, The Brookings Institution, Washington, D.C., 1972. See also Frederic S. Balfour and Charles M. Beach, Towards the Estimation of Payroll Tax Incidence in Canada, a paper prepared for the Economic Council, 1979, for a view which raises questions about the U.S. literature.

This general view regarding the incidence of pension contributions and taxes probably does not, of course, apply fully in all cases. Indeed, in situations where employees are represented by a strong union or where employers are operating in oligopolistic markets, this view may have rather limited application. However, to the considerable extent to which it appears to apply, it is worth bearing in mind in relation to the entire discussion of pension costs.

iii) The Impact on Pension Plan Members and Pensioners. Besides governments and employers, the institutionalization of retirement income arrangements also obviously affects the participants in the system - those paying contributions and taxes towards the public programs, members of employer-sponsored plans, and those receiving benefits from these arrangements. The discussion in this section deals only with the extent to which public and employer-sponsored pension plans protect their participants from inflation.

Since 1974, all the benefits from the OAS, C/QPP, GIS and SPA have been fully indexed to the CPI. Since the introduction of the C/QPP, the type of earnings base adopted for purposes of calculating pension benefits has ensured that inflation has little effect on the real value of pension benefits. Thus, whether or not there is inflation, the public pension system is structured so that the real value of pensions is preserved both while they accrue and while they are being paid.(26)

In the employer-sponsored system, the situation is quite different. It has already been noted that final and best average pay plans have the effect of more or less providing 'pre-retirement indexing'. Flat benefit plans do not provide such adjustments automatically. However, through the process of wage negotiation they generally provide members with benefit levels which increase at about the same rate as wages; and wage increases usually match or exceed the rate of price increases. In the remaining plans, pre-retirement adjustment for inflation is a good deal more haphazard. The outcomes are dependent upon many factors, including the bargaining strength of the employees, the economic position of the employer, the returns achieved on investment, and so on. Accordingly, there is a 'hit and miss' element in the pre-retirement adjustment for inflation in the employer-sponsored pension system.

With respect to the post-retirement period, shortcomings in data make it difficult to develop an economy-wide estimate of the degree to which employer-sponsored pensions-in-pay have been left unadjusted

(26)A quite separate question, not dealt with in this report, is whether the CPI is the appropriate index for adjusting pensioners' incomes. One frequent suggestion is that a special price index for those over 65 should be developed based on the expenditure patterns of that group. A second suggestion is that the price index be based on domestically produced goods and services only. Wage indexing is a third suggestion. All three merit further study.

for inflation. It is, however, clear that during the recent period of very rapid price increases, many pensioners have received only small ad hoc adjustments to their pensions - and some have received none at all. But the report has also noted that for other pensioners - mainly those formerly associated with public employers or with some large private employers - the situation has been quite different. Many of these have had the real value of their pensions more or less maintained and some have, in addition, benefited from retroactively applied adjustments in the pension formula.

Those with deferred pensions are almost always harmed by inflation because the value of their pensions is almost never adjusted for inflation between the time of the employee's termination and his retirement. Since terminated employees have no bargaining power in relation to their former employers, it is perhaps not surprising that this is the case. Nonetheless, it is cause for considerable concern that, with the exception of only a few plans in the public sector, no provision is made to preserve the real value of deferred pensions.

It should be pointed out that even where pension benefits are fully indexed to the CPI, the relative share of national income going to an elderly person will decline to the extent economic growth leads to per capita increases in the real incomes of the working population. Obviously, that erosion will be experienced still more sharply by those whose pension benefits are unadjusted for inflation, the extent of the decline depending on the rate of increase in the cost of living.

Table IV-11 illustrates the effects of various rates of inflation on the real value of \$1 worth of benefits. The table indicates the extent to which those whose pensions are unadjusted for inflation, or only partially adjusted, can suffer substantial reductions in their level of well-being during their retirement years.

Table IV-11

The Value of \$1 in Purchasing Power with Annual
Inflation Rates of 3, 4, 5 and 8% Per Annum

	3%	4%	5%	8%
	(\$)			
After 5 years	0.86	0.82	0.78	0.68
After 10 years	0.74	0.68	0.61	0.46
After 15 years	0.64	0.55	0.48	0.32
After 25 years	0.48	0.38	0.30	0.15

Over the 1973-1978 period, the average annual rate of inflation was around 9% and, over the 1968-1978 period it averaged almost 7%. A 65-year-old male has a life expectancy of around 14 years and for a female it is three to four years longer. With 5% annual inflation, the real value of an unindexed pension after 15 years has declined by more than one-half. Thus, it is clear that if pensions are not adjusted to reflect changes in the cost of living, the impact on pensioners can be devastating, even at rates of inflation substantially below current levels.

Table IV-12 presents data from which a rough estimate can be made of the extent to which the real value of pensions-in-pay are eroded when they are not adjusted for inflation. From the data shown in the table, it is also possible to deduce - as a corollary - the extent to which the costs of an employer decline when pensions-in-pay are not indexed to offset inflation but the rate of return on pension fund investments fully reflects inflation.

The table shows that the total value of an unindexed \$100 annual pension to a man of average life expectancy retiring at age 65 would vary between \$1,115 and \$1,394 - depending upon survivorship provisions - if inflation were zero, but would decline to between \$676 and \$771 if inflation averaged 7.5%. Conversely, the cost to the employer of providing such an indexed pension if inflation averaged 7.5% but nominal investment returns fully reflected this rate, would be some 40% lower than if there were no inflation and both the real and nominal rates of return equalled 3.5%.

Table IV-12

Effect of Inflation on the Real Value of an Unindexed Pension

Value of Unindexed \$100
Annual Pension to Male
Pensioner 65 with Average
Life Expectancy Assuming:

Inflation Rate	Nominal Rate of Return (%)	Inflation-Adjusted Rate of Return	Lifetime Value (1) \$
0	3.5	3.5	1,115-1,394
7.5	11.3	3.5	676-771

Lifetime reduction
in real income with
7.5% inflation

439-623

(1) The two values presented make allowance for different survivorship provisions. The lower values are for ordinary life annuities for males aged 65. The higher values are for pensions with two-thirds continuance to the last survivor.

The results shown in Table IV-12 can be used to provide a basis for estimating the lifetime reduction in real income that could be experienced by those with employer-sponsored pensions who retired in 1976 if inflation averaged 7.5% over the next two decades. It is assumed, for purposes of illustration, that one-quarter of all public employer-sponsored pension payments and all private employer-sponsored payments commencing in 1976 were unindexed. It is estimated on this basis that some \$122 million of unindexed pensions came into pay in that year.(27)

The estimate, together with the data presented in Table IV-12 suggest that if the new unindexed pensions of \$122 million in 1976 were instead indexed to the CPI, the capital required to provide these pensions, assuming a 3.5% inflation-adjusted rate of return, would range between \$1.3-1.7 billion. Similarly, it can be calculated that the capital required to provide for \$122 million of unindexed pensions - assuming a nominal return of 11.3% - would have been \$800-900 million. The \$500-800 million difference between these capital costs is a measure of the lifetime reduction in real benefits which would be suffered by the 1976 pensioners (and their spouses) if their pensions were not adjusted for inflation and if the rate of inflation averaged 7.5% during their lifetime.

Based on the assumptions used in this calculation, the likely maximum decline in the real lifetime benefits received by pensioners who first began receiving unindexed payments in 1976 would be of the order of \$600 million. It is conceivable, however, that somewhat less than half of this erosion in the real value of their pensions might be offset by ad hoc increases in benefits made by former employers. Under this assumption, the cumulative lifetime loss to those retiring in 1976 would be between \$300 million and \$400 million in 1976 dollar terms. This is equivalent to about one-quarter of the capital required in 1976 to provide for fully indexed pensions for this group.(28)

Besides the loss in purchasing power that results from unindexed pensions, there are other undesirable effects which stem from a system where the value of some pensions is eroded by inflation. A system where some pensioners are protected from inflation, but others are not, raises basic questions of equity. As noted earlier in this chapter, possible solutions are dealt with elsewhere in the report. Those with unindexed pensions also face uncertainty and anxiety - never knowing what their future financial position will be. They are at the mercy of economic events and of their former employer's largesse, both of which are beyond their control. This uncertainty and anxiety cannot be alleviated easily, since taking up another job to restore their living standard is often difficult, if not impossible.

(27)Public sector employer-sponsored pension payments totalled just over \$1 billion in 1976; the corresponding figure for private sector plans was just under \$750 million. On the basis of the above assumptions, some \$1.1 billion of all employer-sponsored pensions are estimated to be unindexed. Just over 10% of this total - \$122 million - was estimated to have come into pay during 1976.

(28)It should be noted that even if ad hoc adjustments regularly compensated for, say, half of the 7.5% annual inflation, the real value of the pensions that came into pay in 1976 would have fallen after 15 years to less than 60% of their 1976 value.

iv) Conclusions. The institutionalization of Canada's retirement income system has resulted in government becoming a main actor in it. With the increasing proportion of elderly in the total population, other things being equal, the aggregate outlays by all levels of government will rise as a percentage of GNP, even with the expected decline in the youth-dependency ratio. Although the shift in resources from young to old will not be large for at least another 30 years, after which it will accelerate, it is not too early for federal and provincial governments to begin to consider the kinds of policies that will ease the adjustment process.

The ultimate incidence of pension costs employers pay is by no means clear. There is some evidence to suggest that the backward shifting of pension costs to employees is commonplace. However, at least in a first round sense, employers help to pay for public pensions and for any pension arrangements they sponsor for their own employees. In the case of public pensions, first round costs for Canadian employers are significantly lower than those borne by their United States competitors. The same is also true in relation to employer-sponsored plans.

If the plan an employer sponsors is a defined contribution plan, his pension costs are certain. If it is a defined benefit plan, his long-term costs are determined by a number of economic and demographic variables which are inherently difficult to estimate accurately. The result is that the long-term pension costs of many employers are, by definition, uncertain. These costs are also, in the short run, volatile, which adds to the employer's difficulties. The secular change and volatility of employer pension costs are greatest when the plan in question is not only of the final or best average type, but is also indexed. Here, the cost cushion provided by leaving the terms of plans defined in money terms is not available to employers. Consequently, employers are hesitant to index fully their pension plans, preferring to 'keep control' through the use of ad hoc updates of, or improvements in, plan terms.

A failure to maintain real values, however, reduces the economic well-being of pensioners and transfers the burden of unknown future economic events to them and to plan members. It also means that pensioners must live with a sense of uncertainty regarding their economic future, since they generally lack the ability to redress any loss of purchasing power.

4. Personal Choice. The fourth evaluation criterion which is applied to the retirement income system is the degree of personal choice its various arrangements permit. Are restrictions minimized to the greatest possible extent on individual decisions as to how and when to provide for retirement, the form in which retirement income is taken, and the age of retirement?

The public programs are compulsory. One cannot choose not to pay the taxes and contributions for OAS/GIS, C/QPP, and other public programs. In this respect they are like many other government programs.

A decision is taken by elected representatives regarding the 'appropriate' level of schooling, family allowances or pensions, and the form of taxes and other levies needed to finance these activities.

In general, the restrictions on individual choice occasioned by the public pension programs arouse little controversy. There appears to be a general agreement that, in the absence of these programs, the retirement incomes of most Canadians would simply be too low. Much of the criticism that does exist in this regard is focused on the rules governing the age of entitlement to benefits. The question here is whether more flexibility and choice might be possible with respect to the age of entitlement, without detracting unduly from other desirable characteristics of the public programs. It is noteworthy that some other countries do allow for greater flexibility than does Canada with respect to the age of entitlement in their public programs.

The employer-sponsored system offers more potential for personal choice than do the public plans, although it is by no means always realized. Choice can arise initially in that employees, generally through their unions, may be able to negotiate the terms of the pension plan. In some plans employees are free to join or not to join.

The reality, however, is that there is seldom much personal choice allowed in employer-sponsored plans. To begin with, a very high proportion of current members of such plans had to join as a condition of employment; and once a member, there is seldom an opportunity for an employee to withdraw from the plan. The statutory vesting requirements (45 years of age and 10 years of service) under which an employee's contribution to the pension plan becomes locked in until retirement, also narrows the choice of terminating members of contributory plans.(29) About half of plan members are in plans in which employer approval is required for early retirement on a reduced pension. Incentives to work after normal pensionable age are to some degree restricted by the administrative practices of the federal government which effectively prohibit employees with 2% unit benefits and 35 years of service from accruing additional years of pensionable service if they continue to work. Current legislation also requires that pension benefits normally be taken in the form of a life annuity.

There is undoubtedly a variety of views concerning the desirability of the degree of compulsion now found within the employer-sponsored pension system. Some find all the compulsory measures associated with the employer system inappropriate. Within this group, one school of thought holds that all compulsory pension arrangements - whether public or private - are an unwarranted intrusion on people's freedom to arrange their lifetime consumption. Those holding this opinion would argue with equal vigour against the C/QPP, the OAS and the compulsory private plans. It appears, however, that few people are in this camp. A second and more widespread opinion within this group is that compulsory arrangements are only appropriate when their shape and design have been determined by the state. Those holding this view thus see the compulsory elements of employer-sponsored plans as inappropriate; they argue that

(29)See Chapter III.

if arrangements are to be operated by employers to produce retirement income, such arrangements should have as much personal choice associated with them as exists in ordinary saving plans.

Others are less critical of the compulsory elements of the employer-sponsored system. They believe that there is some level of well-being in retirement in relation to that before retirement below which no one would wish to fall. Accordingly, they consider that a mandatory system which ensures the availability of some level of post-retirement income is entirely appropriate. Again there are two views within this group. The first regards the existing compulsion within employer-sponsored pension plans in the same light as compulsory public plans - each as justifiable as the other in terms of its effect in making possible some agreed upon division of lifetime earnings between work years and retirement years. The second view within this group is held by those who note that, even with the existing levels of compulsion within the employer-sponsored pension system, the pension results are disappointing, given the incomplete coverage, the delayed vesting, and the near-absence of full indexing. Those holding this view wish to extend to the entire labour force the degree of compulsion now encountered by the members of a typical employer-sponsored pension plan. At the same time, they would reorganize the system so that all employers are required to offer plans that would produce adequate pensions.

It is difficult to choose among these views in evaluating the present retirement income system from the 'personal choice' perspective. Perhaps the most that can be said is that if society were able to reach a consensus as to the level of pensions that is appropriate, most people would agree that the arrangements designed to produce these results should be compulsory.

Apart from the restrictions embodied in public and employer-sponsored plans, the regulatory environment also affects personal choice in two ways that are of current interest. It affects choice initially through the way in which the tax incentives for RPPs and RRSPs are framed, which is in the form of annual deduction ceilings. This likely meets the convenience of many, though not necessarily all, people. For instance, those who are unable, or who for some reason fail, to save for retirement in their 30s and 40s may find the annual deduction limits constraining if their earnings in later years are high.

The other element of concern in the regulatory environment is the compulsory annuity requirement attached to RRSPs. Prior to the Budget of April 1978, the provisions of RRSP contracts required the payment of retirement income in the form of an annuity for life commencing no later than the seventy-first birthday of the holder of an RRSP. The April 1978 Budget widened the option by allowing the purchase of term annuities which expired in the annuitant's ninetieth year. The requirement that RPPs pay benefits in the form of a life annuity remains unchanged. The implications of changing both these requirements are examined in Chapter XIV.

5. The Effect of the System on the Dignity of, and Respect for, the Elderly. Does the retirement income system impinge on the dignity of, or the respect for, the elderly? Are the elderly stigmatized through an income test, or otherwise seen as 'welfare' recipients? Or are their pensions seen as their due?

The issue here is straightforward. The greater the conditionality and uncertainty associated with the real incomes of the elderly, the more likely it is that the elderly will be made to feel uncomfortable. The fewer the conditions and the greater the certainty surrounding their real incomes, the more likely they are to regard themselves as full members of society.

From this perspective, public programs are very positive. There is little or no stigma attached to OAS and C/QPP and, although the GIS and most provincial top-ups are income-tested, it is hard to conceive of the test being applied in a less intrusive way. Moreover, the fact that the pension income from these benefits is price indexed, thus preserving its value in real terms, cannot help but add further to the confidence of the elderly.

With respect to the employer-sponsored system, no question of stigma arises in relation to the basic pension. But pensions from this source are more likely to be eroded by inflation. The pensioner is, therefore, often left with the need to press his former employer for ad hoc adjustments. He may also have to seek the support of the active workers in the plan - his former workmates - to improve the prospects of securing employer approval for his representations. The resultant feeling of dependence is likely to reduce the well-being, the confidence and, hence, the sense of dignity and self-respect of the recipients.

6. Understandability of the System. An effective retirement income system should facilitate personal planning for retirement and mitigate the risks involved in such planning. To do this, the system must be readily understandable by participants.

The OAS, GIS and SPA are fairly easily understood. The CPP and QPP are more complex. A future C/QPP recipient whose earnings have not grown at a rate identical to the rate of growth of the earnings ceilings of the plans, or who has not worked for extended periods, would normally be hard pressed to estimate future benefits from these programs. Provisions relating to the method of revaluing earned benefits are not understood by most participants. Perhaps most critically, it is likely that many current participants are not aware that their C/QPP contribution rates will have to be increased within the next decade or so to meet the cost of benefits.

The employer-sponsored pension system as a whole is also not easily understood. The nearly 15,000 employer-sponsored pension plans embrace a bewildering array of terms and conditions. They can be: defined contribution or defined benefit; contributory or non-contributory; trustee or insured; compulsory or voluntary; and integrated with or 'stacked upon' the C/QPP under a variety of methods. In addition, there

are wide variations with respect to eligibility conditions, death and survivor's benefits, vesting conditions, retirement age, and provisions for escalation. The list is by no means complete.

Of course, employees are in only one plan at a time. They need not understand the entire system. And their own plan may not be much different in terms of degree of difficulty in understanding than the C/QPP. Where employees are contemplating a change in job, however, the decision as to whether or not to move to one of several other employers may be complicated by differences between the plans of their current and prospective employers. Differences between plans also add to complexity of portability arrangements in the limited number of cases where reciprocal transfer agreements exist. Thus, the principal criticism of the current employer-sponsored arrangements from the point of view of level of understanding is that they make it difficult for employees to reach informed decisions about the impact of job changes on pension arrangements.

An overview of private pension plan developments in Western European countries indicates the emergence there of a growing trend towards compulsory plans. There is a similar trend toward standardization of benefit formulae, which facilitates understanding. In France, private plans are virtually compulsory, and compulsory private plans are being developed in the Netherlands and Switzerland. This necessarily leads to greater standardization, as does the arrangement in the United Kingdom, where private plans meeting specific conditions may be substituted for a portion of the public program.

7. Administrative Efficiency. In delivering income to the retired, the administrative overhead of the system should be as low as is consistent with its other objectives. The public pension system entails relatively small administrative costs. Total administrative expenses of Health and Welfare Canada for the OAS program are in the order of one-half of 1% of the amount of the benefits paid. For the CPP, which is a more complex program, administration costs in 1978 amounted to about 1.3% of the sum of contributions received and benefits paid.(30) This percentage may be expected to decline as the CPP matures. Reorganization is underway in Health and Welfare Canada to bring the OAS and CPP programs under a common administration.

The C/QPP also involve administrative costs to employers, as they have to make the payroll deductions. In addition, owing to their integration with many employer-sponsored plans, the C/QPP may also make the administration of those plans slightly more complex. In particular, when the C/QPP contribution rates rise, they will affect the financing arrangements for the integrated plans.

While no figures are available on the annual costs of administering the employer-sponsored system as a percentage of contributions received and benefits paid, it is undoubtedly the case that such costs are higher than the comparable costs of administering the C/QPP.

(30)Derived from National Accounts data.

B. The Evaluation in Summary

Because this evaluation of the existing retirement income system in Canada based on seven different criteria adopted has been lengthy and complex, it may be useful to summarize the main points that emerge before turning to a discussion of the major policy issues that flow from this analysis.

1. The Replacement Income Sources. The heavy reliance of the elderly on the GIS, the large proportion of the elderly who have little or no replacement income, and the sharp drop in the disposable income available to retired couples in the middle-income ranges from that available as they approached retirement, all suggest that many of the current elderly experienced a sharp drop in their living standards when they retired. The maturation of the C/QPP will significantly improve the performance of the retirement income system for the future elderly. But the C/QPP are only intended to replace 25% of pre-retirement earnings up to the level of average wages and salaries. Even assuming the OAS continues to play the same relative role in the future as it does now, the OAS and C/QPP together will not maintain the living standards of those who were middle-income earners during their working years. The maintenance of living standards of this group would require replacement income, in addition to OAS, of between 40 and 45% of average lifetime earnings up to 1.5 times the level of AWS. Available evidence suggests it is far from certain that investment income and employer-sponsored pensions will, in the future, replace substantially higher fractions of pre-retirement income than they now do. Moreover, a dominant characteristic of these income sources is that they are concentrated in relatively few hands; this is also unlikely to change. A rough estimate is that between one-third and one-half of the current working generation having incomes in the middle ranges will encounter significant reductions in living standards when they retire. On this basis, the system as it is now expected to develop will not generate, in aggregate, adequate amounts of retirement income.

2. Fairness of the Distribution and Financing of Retirement Income.

a) Redistribution Among Income Groups.

i) The Current Elderly. The incomes of many of the current elderly, principally (but not exclusively) those who are single, who live alone in rented accommodation, and who are in their 70s or older, are below commonly accepted poverty lines - in some cases significantly so where no provincial top-ups are provided. A disproportionately high percentage of these people are female.

ii) The Future Elderly. If the present relationship of OAS and GIS to wage and salary levels is maintained, the combined benefits to the elderly of the future from these two programs and the C/QPP would leave them better off by comparison with the non-elderly than is the case today. But if adjustments to OAS/GIS benefits in the years ahead reflect only increases in prices and exclude real per capita economic growth, the gap between the per capita incomes of the elderly and non-elderly will likely be no smaller than it is today.

Providing the current relationship of OAS/GIS benefits to wages and salaries is maintained, the combined effect of the public pension and tax systems now in place will be to bring about a substantial redistribution of income over the life cycle from high-income groups to low-income groups. Based on assumptions set out in the text, in present value terms, the poorest 20% of the population will receive benefits equal to more than one and one-half times the amount they paid in C/QPP contributions and federal taxes.

b) The Treatment of Savers. RRSPs provide a significant incentive to save for those with high and middle incomes, whether in an inflationary or non-inflationary environment. In the absence of RRSPs, especially with inflation, the inflation-adjusted after-tax rates of return on investment received by savers in those income groups would be quite low. But with RRSPs, after-tax rates of return on an inflation-adjusted basis can exceed before-tax market rates.

Members of RPPs and those saving through RRSPs who have low pre-retirement incomes and who might otherwise be in a position to draw GIS and/or provincial top-up benefits in retirement can receive low or negative rates of return on their savings over their life cycle. For those individuals, saving outside of registered vehicles is better than saving through registered vehicles.

c) Differences in Treatment of Those in Similar Circumstances. Entitlement to GIS and provincial top-ups does not take account of the wealth position of the recipients. Consequently, those who are in similar economic circumstances may well be treated quite differently by these income-tested programs, depending on whether or not they hold their wealth in forms that generate a cash income.

Depending on whether a person is self-employed, or employed by another, and depending on the type of pension arrangements employees are offered by their employer, the income tax system treats people with similar incomes differently, offering larger deductions to some than to others.

The death of a C/QPP pensioner gives rise to a 60% survivor's pension (if the survivor is 65 or over). If the pensioner's spouse dies, however, no such reduction occurs in the retirement pension.

Common design features of employer-sponsored defined benefit plans - such as final and best average earnings bases, less than full and immediate vesting, and certain early retirement provisions - can have the effect of providing quite different pensions to members of a pension plan who are in essentially similar situations. There is little consistency in the relationship between what was given up in the pre-retirement period and what is received in retirement. An individual's mobility pattern, earnings path, length of uninterrupted service, and timing of plan membership are likely to be crucial in determining pension entitlements. These differences are very difficult to justify, particularly since these design features frequently tend to work against the same groups - low-income individuals and women.

In addition, the well-being of pensioners may differ substantially due to differences between plans. These differences stem in large part from the varying capacity of employers and employees to enhance, through the vehicle of pension plans, the well-being of pensioners. Where this capacity is slight (mainly among smaller employers selling in highly competitive markets), the pension plans are more likely to resemble group saving devices; where it is greater (mainly in the public sector and among large corporations), pension plans are more likely to involve direct transfers from one generation to another. These differences raise questions about the fundamental fairness of the employer-sponsored system. Some group of employees are 'insured' against an uncertain future, because of the taxing or market power of their employer; others do not have such insurance.

d) Fairness Across Generations. The intergenerational perspective suggests that there is a presumption that the well-being of the current elderly should be improved to bring it more closely into line with that which the present working generation has arranged for its own retirement years. Whether or not this is done, the current working generation should monitor carefully the size and nature of the capital stock it is passing forward to future generations. Significant imbalances between the capital stock and the pension burden being passed on should be avoided, since one effect of such imbalances would be to reduce the probability that the pensions promised now will be paid. Expectations that the aged-dependency ratio will rise markedly in the decades ahead reinforce the need to give special attention to this point, though it is important to note that the total-dependency ratio is not likely to change significantly.

3. Economic and Institutional Impacts.

a) Economic Impact. Public and employer-sponsored pension plans have probably somewhat reduced, at least in a first round sense, the supply of labour from what it would have been in their absence. The size of this effect cannot be determined, but lower ages of entitlement to public pension benefits and the increased use of early retirement provisions in employer-sponsored plans would almost certainly reduce the potential supply of labour in future years, when the growth rate of those of labour force age is expected to be considerably lower than it is today.

There is no clear evidence to support the view that Canada's capital stock is smaller than it would have been in the absence of public and employer-sponsored pensions. While it is probable that any impact of these pension arrangements on the capital stock has been on the downward side, it is considered here - based on existing evidence - that if there has been such an effect, it has probably been small.

Many governments have used public and employer-sponsored pension funds as a captive source of financing. In some important cases, the captive funds have been made available at less than market rates of interest. Some would regard this as conducive to more government borrowing than would have otherwise occurred and, hence, to a larger stock of public capital than would have existed if governments had been required to obtain all of their financing in the market place.

b) Institutional and Other Impacts. Since governments play an important part in the retirement income system, they will be significantly affected by the changing demands on the system. Other things being equal, the changing age structure of the population will lead to governments, in aggregate, using a higher proportion of GNP during the next century. Increasing expenditures on the elderly will outweigh relatively smaller expenditures on the young.

Employer costs on public and employer-sponsored pension plans are significantly lower in Canada than in the United States.

The pension costs of employers who offer defined contribution plans are not subject to guesswork. Once annual contributions are paid, the employers' pension obligations in respect of that year are fulfilled. Employers offering defined benefit plans, however, face uncertain long-term costs. In addition, the estimated annual costs, as calculated by actuaries, can be quite different from those actually experienced. The more fully indexed a defined benefit plan is, the greater the degree of uncertainty in the employers' long-term costs and the sharper the fluctuations in their estimated costs in the short run. It is likely that few employers will, therefore, willingly accept the risks associated with contractually indexed, defined benefit plans.

Higher than expected rates of wage and salary growth, and poor inflation-adjusted rates of investment return, contributed to rising employer costs for employer-sponsored plans in the 1970s. It is not yet clear if these rising costs are indications of volatility - and hence will be reversed - or if they reflect secular changes in the economy.

While the risk to the individual employer associated with a fully indexed defined benefit plan may well be large, in the absence of pensions in which real values are preserved, the real income of pensioners will be significantly eroded. The estimated additional capital cost of maintaining fully the real value of pensions that came into pay in 1976 was \$300-400 million.

4. Effects on Individual Choice. The public and employer-sponsored pension systems offer little personal choice to their participants. In the case of the public plans, this lack of choice appears to have aroused little controversy. While restriction of choice is generally regarded as necessary to the maintenance of an effective retirement income system, a question to be examined is whether a somewhat greater degree of flexibility could not be provided, particularly with respect to the age of entitlement to public pension benefits.

5. Effect on the Dignity of the Elderly. The design and operation of the public programs are positive on this score. But while there is no stigma attached to the receipt of pensions under the employer system, the uncertainty with respect to their real value in years to come cannot help but affect adversely the self-confidence of the elderly.

6. Understandability. While the public retirement income system is relatively easy for its participants to understand, apart from the

C/QPP, the employer-sponsored system in general is less easily comprehended. This is due to the diversity in the types of plans, the variations in their terms and conditions, and the fact that people may find themselves moving frequently from one plan to another.

7. Administration. The costs of administering the public programs (as a percentage of contributions collected and benefits disbursed) are very likely lower than the costs of administering the employer-sponsored pension system.

CHAPTER V

A FRAMEWORK FOR CONSIDERATION OF POLICY ISSUES

A. Introduction

This report suggested at the outset that public policy respecting Canada's present retirement income system appears to have been directed at the achievement of two broad objectives.

Briefly restated, the two main objectives were described as the alleviation of poverty among the elderly, and the provision of assistance to help and/or require people to allocate appropriately their lifetime income, and hence consumption, between their pre-retirement and post-retirement years.

Governments seek to achieve this second objective by:

- ensuring that those age 65 and over are eligible to receive public pensions that are not conditional on their current economic circumstances, i.e. not income-tested;
- encouraging those who wish more consumption in the retirement years than is provided by public pensions to participate in employer-sponsored pension arrangements or to save privately; and
- helping to ensure, directly or indirectly (through the establishment of vesting, solvency, disclosure and investment standards), that employer-sponsored pension benefits are, in fact, provided in the amounts expected by members.

It may also be desirable to recall the principal reasons why governments have considered it important to provide the elderly with public pensions that are not income-tested:

- the great bulk of private institutional arrangements are not able to protect pensioners fully against damaging economic developments, such as high rates of inflation;
- people have difficulty in anticipating correctly their retirement needs and in carrying out a personal savings plan to satisfy them; unless a system is in place which requires people to forgo current for future consumption, many fail to do so;

- once an adequate pension system is in place, the problem of poverty among the bulk of the elderly is overcome. Programs such as the Guaranteed Income Supplement (GIS) can then be confined in the main to helping those who had little income before reaching retirement; and
- confining programs like the GIS to those who had little income before retirement reduces taxpayer burdens and helps to prevent the type of inequities that arise when those who save during their working years are no better off than those who do not.

Taking account of the existing objectives of public policy, and the reasons that underlie them, the immediately preceding chapter evaluated the Canadian retirement income system as it was in the mid-1970s and identified a number of serious problems.

With respect to the current elderly, one of the principal problems is that many have little or no replacement income. Indeed, many who were not poor before retirement are left at retirement with incomes that are at, or close to, the poverty line. Consequently, an unduly high proportion of the elderly depends heavily upon income-tested programs.

A second major problem of the current elderly is that the income-tested programs do not always raise their incomes above commonly cited poverty lines. Unattached elderly individuals, particularly those who do not own their own homes and are without housing subsidies, frequently have incomes substantially below these levels. Many of those in this position are widows.

Even with the maturation of the present Canada and Quebec Pension Plans (C/QPP), and even with the assumption that Old Age Security (OAS) benefits will increase in line with the rise in average wages and salaries (AWS), those in the middle-income range during their working years who rely on benefits from the public pension system alone will encounter significant reductions in living standards after they retire. Moreover, it appears, on the basis of current estimates, that a significant proportion of them will enter retirement with little or no income from private savings or employer-sponsored pension plans. Consequently, it was concluded that an estimated one-third to one-half of middle-income earners - the future elderly - could expect to undergo significant reductions in living standards on retirement.

Another major concern is that a number of the retirement income programs affect people differently even though their economic position either during their working years or in retirement is similar. For instance, income-tested programs can treat people in similar economic positions differently, depending on the form in which people hold their wealth. Survivorship benefits under the C/QPP treat a surviving spouse less well than a survivor in whose name the pension credits stand. With respect to employer-sponsored plans, some people are and will continue to be advantaged, and others to be hurt, for reasons that are difficult

to justify - the frequency with which their job status is changed, their earnings pattern and the type of employer for whom they have worked.

A third principal area of concern relates to the appropriateness of current public pension arrangements in relation to the taxpayers of future generations. A main issue here relates to the financing of the C/QPP, and the uneven burden between generations implicit in current contribution schedules, which do not cover the full cost of benefits promised. Another pertains to the changing age structure of the population and the anticipated increase in the aged-dependency ratio.

B. Goals of Reform

The remainder of this report outlines various ways of alleviating the problems that have been identified. Moves to reform the system need to focus on the following broad goals:

- increasing the amount of retirement income that the system generates by increasing the size of pension arrangements under which benefits are paid on a basis that is not conditioned by the current income of the pensioner. This would require improvements in the various arrangements that help and/or require people to defer consumption from their work years to their retirement years;
- reducing the scope for arbitrary differences in the treatment of people in essentially similar economic circumstances, thus improving the allocation of pension benefits. This requires changes to both the employer-sponsored pension system and the public pension system;
- eliminating poverty among the elderly; and
- ensuring that present pension arrangements and those that emerge from reform are fair between generations.

While there is some interaction between these goals, it is particularly important to note that the attainment of the first goal would limit the need for income-tested programs. One result would be that the particular equity problems created by such programs would be much reduced, which is part of the second goal. Furthermore, since fewer people would require GIS and other income-tested benefits, the cost of overcoming poverty among the elderly, the third goal, would also be reduced. Thus, the first goal of increasing the amount of unconditional retirement income is fundamental to reform of the system.

C. Considerations Relating to the Mix of Pension Programs

In Chapter IV, in attempting to form a judgment about the extent of replacement income the retirement system should generate, it became clear immediately that the amount depends in the first instance on the size of OAS and GIS benefit payments. The larger the OAS, in particular,

the less the need for replacement income - and vice versa. It is also the case that the larger the size of OAS benefits, the smaller the role that needs to be played by GIS and other income-tested programs. In other words, the OAS is the base on which both the replacement income system and the income-tested system stand. As such, the role assigned to the OAS will determine the role required of the other parts of the system.

In 1978, the OAS was equal to about 14% of AWS. In the past it has generally been higher (see Table III-2), having peaked at 20% of AWS in 1964. It should be noted that the public discussion surrounding the introduction of the C/QPP in the early and mid-1960s did not contemplate these earnings-related pension programs replacing the flat rate OAS. It was accepted then that the public system would have both a flat rate and an earnings-related component, together with an income-tested supplement for those who would otherwise live in poverty.

Assuming the OAS pension to be a permanent feature of the Canadian system, the design of other retirement income arrangements has to take its size into account. The retirement income provided by the C/QPP, employer-sponsored plans and, indeed, personal saving is generally related to pre-retirement wage and salary levels. Thus, it follows that once a decision has been made about the relative role that the OAS should play in the overall retirement income system, that role should be maintained by providing - either by a statutory provision or on an ad hoc basis - that OAS benefits keep up, or largely keep up, with the growth of wages and salaries. If the OAS benefit level is linked to prices alone, this would make it difficult to determine the appropriate role to be played by earnings-related pension plans, since the OAS benefit level would be shrinking in relation to pre-retirement wage and salary levels at a rate that could not be determined in advance.

A number of other considerations are also pertinent to the determination of the OAS benefit level. The following are among the more important:

- for a given volume of retirement income benefits, the greater the proportion that is paid through the OAS, rather than through earnings-related pensions, the greater the degree of income redistribution that will occur within a cohort as it moves through the system, and vice versa;
- the OAS transfers income directly to those, such as homemakers, who do not have a history of paid employment during their work years;
- the larger the OAS, the smaller the role the GIS and other income-tested programs need play. To the extent that the latter programs involve inequities and disincentives, the stronger the case for relatively larger OAS benefits; and

- although there is a case in favour of universal OAS benefits, such transfers involve a larger flow of money through government than if income security were provided to those in need through selective, income-tested programs.

Therefore, as a first step, it is important to form a view about the appropriate level of OAS and, having decided that, to attempt to ensure that it keeps up with average wages and salaries.(1) Given that the OAS transfers incomes to those ineligible to participate in earnings-related pension plans, that it is redistributive and that it appears to have few adverse incentive effects, and given also that it is simple to administer and easy to understand, there is a good case for having it at least maintain its current relative importance. But if it were decided to reduce its relative role, then this would obviously have to be taken into account in the future design of earnings-related and income-tested programs. For purposes of this report, and to facilitate discussion of the remaining components of the retirement income system, it is assumed that OAS will be preserved at its current level relative to AWS.

Proceeding from this assumption, it is necessary now to begin to consider the role that should be played by other parts of the retirement income system in order to achieve the goals of reform outlined earlier.

In view of the anti-poverty focus of income-tested programs, it is probably generally accepted that their principal role in a mature retirement income system should be to assist those who were poor before retirement. Consequently, there will likely be widespread agreement that these programs should play a relatively much smaller role in a mature retirement income system than they now do. If, in such a future system, a large proportion (say, one-half) of the elderly were receiving benefits from programs with an anti-poverty focus, the conclusion would have to be drawn that the remaining parts of the retirement income system - public and private - were somehow failing to meet their goals.

The remaining programs, for purposes of the lengthy discussion that will follow, are grouped as follows:

- those which provide retirement benefits that are not conditional upon current income and in which participation is mandatory, as is the case with the OAS and C/QPP; and
- those programs (or activities) where the retirement income provided is again unconditional, but where the income arises from voluntary arrangements, such as personal saving and participation in employer-sponsored pension plans.(2)

(1) This could be done through wage indexing or, alternatively, automatic indexing might be replaced by some alternative formula which required updating no less than, say, once every three years.

(2) The classification of employer-sponsored pension plans as voluntary stretches a point since, as noted above, most members of such plans are required to participate. Such arrangements are voluntary only in the sense that the state does not require employers to establish plans nor oblige employees to join them.

In deciding on the relative role of these two groups of programs, there are, broadly speaking, two views that can be taken. One view is that many Canadians share an opinion - explicit or implicit - about the appropriate division of their lifetime consumption between working and retirement years, and that they are prepared to have that division incorporated by law in a mandatory pension system. According to this view, a retirement income policy that is based significantly on personal saving will leave many participants in the system unsatisfied with the results, given the range of uncertainties about the circumstances that will exist in the future. Accordingly, those who hold this view will tend to favour a mandatory, institutionalized approach to the provision of retirement income. They would maintain that once some appropriate pension level was determined, most Canadians would support whatever mandatory arrangements were necessary to produce that level.

A second view is that it is inappropriate for government to intervene in private matters of this nature. In principle, those who hold this view are unenthusiastic about those public pension programs that now disburse unconditional benefits financed by taxes and other compulsory charges - the C/QPP and the OAS - though as a practical matter they may be ready to tolerate their continuance. They would continue to oppose mandatory programs generally, however, on the grounds that such arrangements narrow personal choice and may interfere with economic development. While they may well acknowledge the difficulties associated with personal saving, they would argue that existing incentives provide reasonable rewards for those with the foresight to plan.

The chapters that follow set out four broad policy approaches for improving the pension system. Each of the four approaches would improve substantially the allocation of earnings-related pension benefits, which is one of the reform goals that has been established. Two of the four approaches would also improve substantially the amount of pension benefits provided on a non-income-tested basis, which is another of the reform goals.

The first two approaches, which are mutually exclusive, would make it necessary for all employer-sponsored pension plans to meet certain legal requirements designed to improve the allocation of pension benefits. However, as it would not be mandatory for an employer to offer such plans, it is far from certain that there would be any significant increase in the total amount of pensions paid out if either of the options were adopted.

Option 1, which is covered in Chapter VI, outlines proposals for strengthening current arrangements in the employer-sponsored system.

Option 2, outlined in Chapter VII, deals with an alternative 'savings-type' approach under which defined benefit pension plans would be replaced by defined contribution plans or a new registered retirement vehicle, the Registered Employee Pension Fund (REPF).

The final two approaches would involve a mandatory extension of pension plan coverage, either through employer-sponsored pension plans

or public pension plans. The design of these policy alternatives would ensure a significant improvement in both the allocation and amount of benefits, but would also add to costs for people now lacking good pension coverage.

Option 3, which is described in Chapter VIII, would require all employers to offer one of several types of standard pension plans.

Option 4, covered in Chapter X, examines the alternative of expanding benefits available through the C/QPP or other public programs. A sub-option, Option 4A, is also outlined. Under it, employers could 'contract out' of the expanded public pension system if they undertook to provide similar benefits through their own plans.

Chapter IX discusses a number of alternative measures that could be adopted by government to facilitate or require - to one degree or other - the maintenance of the real value of benefits provided by employer-sponsored pension plans. Therefore, it is linked to the first three options, and Option 4A, all of which are concerned with the employer-sponsored system.

Chapter XI compares the four options to one another on the basis of the evaluation criteria applied in Chapter IV in relation to the existing retirement income system. Chapter XII examines further the costs of the existing system and of the four options.

The goal of improving the allocation of benefits is also dealt with in a number of other chapters. Chapter XIV is concerned with whether tax assistance for retirement saving can be made fairer and more flexible. Chapter XVI sets out the implications for women of the various policy options discussed in Chapters VI to X, as well as other possible reforms that would be particularly important for women.

Possible steps toward the elimination of poverty among the elderly - the third reform goal - are discussed in Chapter XVII, along with some other policy issues.

The fourth principal reform goal - intergenerational fairness - is considered in the discussion on the financing of pensions in Chapter XIII. This goal is also considered in a number of other chapters, where alternative approaches to reform are considered. This is because the rapidity with which any such reforms are phased in would determine in an important way the relative burden borne by different generations.

Chapter XV considers ways of providing greater freedom of choice to individuals with respect to the age at which they retire by providing more flexibility regarding the age of entitlement to public pension benefits.

CHAPTER VI

OPTION 1: STRENGTHENING CURRENT ARRANGEMENTS IN THE EMPLOYER-SPONSORED PENSION SYSTEM

Earlier chapters described the problems associated with the current employer-sponsored pension system. Firstly, the amount of replacement income currently generated by the employer-sponsored system is low, with the result that when the estimated amount of income from this source is added to the estimated amount of income from public pension plans and from private saving, it can be concluded that a significant proportion of the current working generation will be relatively less well off in retirement than they now are. Secondly, some design features of employer-sponsored plans result in unfair discrimination among members of the same plan. Finally, since a relatively small number of large employers are able to provide plan members and pensioners with substantial protection against inflation, those in otherwise similar circumstances receive widely varying treatment depending upon the nature of their employer.

This chapter considers possible means of overcoming or alleviating these problems within the framework of the present employer-sponsored pension system.

A. Types of Measures Needed

A non-mandatory employer-sponsored pension system that would better satisfy the evaluation criteria established in Chapter IV would have to include the following three features:

- earlier 'locked-in' vesting. For example, a rule of 30 years of age and 2 years of service might be appropriate. To reduce the administrative costs of earlier vesting, employers operating contributory pension plans could be given the option of providing vested short-service employees (say, those having five years of service or less) with a double refund of contributions. Such a refund would be locked into another registered retirement vehicle until retirement;
- revaluation (updating) of deferred pensions. Deferred pensions of terminated employees in defined benefit plans would be revalued between the date of termination and the normal pensionable age in the plan so that the value of the pension benefits earned by such employees would not be significantly less than it would have been had they remained with their former employers; and

- maintenance of the real value of pensions-in-pay. Pension payments would be increased in line with the rise in a price index, or other measures would be introduced to preserve, in substantial part, the real value of such pensions.

The first two measures, taken together, would provide effective 'portability'. The third would eliminate, or reduce significantly, the effect of inflation on pensioners' incomes. To provide consistency in treatment between those with employer-sponsored pensions and those who are unable to earn such pensions, Option 1 also provides that, on retirement, elderly people who do not have substantial income from employer-sponsored pension plans should be able to purchase life annuities whose real value is preserved fully or in substantial part.

To reduce some of the arbitrary differences in treatment of people in the same plan, and to help deal with the plight of survivors, further steps should include:

- establishment of a requirement that employees retiring before the normal pensionable age provided for in the plan (usually age 65) generally be entitled to receive a pension only on an actuarially reduced basis;(1)
- a requirement that all pension plans provide for post-retirement survivor benefits and for the division of pension credits between spouses on marriage breakdown; and
- gradual elimination of earnings bases in pension plans of the final average or best average type. They should be replaced by bases that provide more equal treatment of those with different career earnings paths and at the same time provide as good or better protection against inflation. While such a change should be encouraged, it should not be required by legislation.

In addition to these six measures, the degree of individual choice in the system could be enhanced by facilitating the expansion of pension coverage. This could be done through a new income tax provision that would enable employees not covered by a Registered Pension Plan (RPP) to initiate their own 'pension' arrangements. Unlike the Registered Retirement Savings Plan (RRSP) arrangement, where employees alone can contribute on a tax-deductible basis up to specified limits, employers would also be allowed to contribute to such an arrangement on a tax-deductible basis. The accumulations resulting from such contributions would be subject to 'lock-in' provisions. Such a measure might help to accommodate those who wish pension coverage, but who do not now have it. The arrangement would be similar to a money purchase arrangement, except that the employer would have no responsibility for the terms of the arrangement or its management.

(1) This raises the question, discussed later in this chapter, as to whether pensions which become payable after the normal pensionable age should be paid on an actuarially increased basis.

In approaching each of the measures outlined above, three points should be borne in mind. Firstly, this initial option of strengthening the current employer-sponsored system involves less change to the existing retirement income system than do the other options discussed later. It builds on existing structures, retaining much of the diversity that characterizes current arrangements. Secondly, since sponsorship of plans is not mandatory, this option involves a less comprehensive and integrated approach to retirement income policy than either Option 3 or Option 4, each of which would involve mandatory provisions with respect to coverage. Lastly, in view of the division of constitutional powers on pension matters, legislative action by both the federal and provincial governments would be needed to implement most of the measures on a nationwide basis.

The pages that follow examine each of the provisions of Option 1 as outlined above. At the end of this chapter, consideration is given to the question of whether moral suasion might be substituted for legislation as the device for implementing some of the measures listed here.

1. Earlier Locked-In Vesting. The evaluation of the existing employer-sponsored pension system undertaken in Chapter IV concluded that a fundamental weakness in many plans is the lack of adequate provision for portability of pension benefits.

Implicit in the notion of portability is the concept that mobile employees, including those who have given up their job involuntarily, should receive treatment with respect to pensions broadly similar to that which they would have been accorded if they had remained within the same plan.(2)

Arrangements that treated mobile and stable workers similarly would remove this important and widely criticized weakness in the employer-sponsored system. They would increase the probability that workers would accumulate years of pensionable service to their credit that more closely matched the number of years spent as members of pension plans than is now the case.

It should be noted that portability carries two meanings. One describes arrangements under which pension funds are transferred when an employee moves from one plan to another. Some large employers, particularly in the public sector, utilize the transfer-of-funds mechanism.

(2)It should be noted that in this report mobile employees are considered to be not only those who voluntarily change jobs, but also those who lose their jobs because their employer has gone out of business, because their skills have become obsolete, or for any number of other reasons.

To require all employers to establish such agreements, however, does not appear to be an appropriate basis for guaranteeing portability within the employer-sponsored pension system generally, particularly given the difficulties that arise in the case of defined benefit plans.(3)

A more promising route for improving portability is through earlier vesting. This notion of portability offers a sound basis for policy, but only so long as the value of the vested benefit is adjusted during the period between termination and retirement so that it is worth more or less what it would have been - in relation to pensionable service - if the employee had remained with the same employer, as discussed in the following section.(4)

Once provision has been made for a suitable system of updating deferred pensions, consistent treatment of active and terminated employees requires that vesting standards be close to 'full and immediate'.

Full and immediate vesting in employer-sponsored plans may involve significant administrative costs. If employees could establish pension credits in respect of very short periods of work, employers

(3)One difficulty associated with defined benefit plans is that today's value of an employee's pension benefits depends on actuarial assumptions about future rates of investment return, inflation, employee turnover, salary progression and mortality. If the 'sending' and 'receiving' plans have different views on these matters, agreement on the computation of the transfer values might not be reached. If common assumptions were established by some central body, this problem could be reduced. But it would not be overcome because experience under all plans is only rarely identical. Any set of common assumptions is arbitrary and, hence, likely to favour some employers at the expense of others. The difficulty is compounded in the case of transfers between plans with different benefit formulae, such as flat benefit and final average.

A second difficulty arises if the sending plan is not 'fully funded', since transferring funds out of it in respect of a terminating employee may leave him better off than those who do not terminate should the plan subsequently be wound up. The remaining employees might get less than the value of their accrued benefits, while the mobile employee would have transferred with all of his. Here too 'rules of thumb' could perhaps be established. As mentioned in Chapter III, the Canadian Life Insurance Association (CLIA) has advanced proposals for the inclusion of transfer-of-funds portability provisions in employer-sponsored pension plans. Their proposals do in fact include rules of thumb designed to minimize the effect of these and other difficulties. While the CLIA proposal may well lead to some extension of transfer-of-funds portability, it is difficult to envisage that it could ever cover more than a small percentage of mobile employees. When defined contribution plans are involved, transfer-of-funds portability is much easier.

(4)The vested benefit of a terminated employee may also be referred to as a deferred pension or deferred annuity. All three terms are used in this report.

would have to keep track of numerous trivial pension credits. If this were to result in an unduly large administrative burden, some employers might terminate their plans.

A rule under which an employee was required to have reached 30 years of age and put in at least 2 years of service to qualify for vested pension benefits (or a rule whereby any combination of age and years of service equalled, say, 35) might represent an appropriate middle ground between the desire to treat employees more or less similarly and to avoid significant administrative costs.

To further reduce the administrative burden, this option would allow employers who did not wish to provide deferred pensions to short-service vested employees - those with five years of service or less - to return to the terminating employee an amount equal to double the employee's contribution, together with interest. Some employers might prefer to adopt this alternative in order to avoid the necessity of maintaining records respecting short-service employees for a period of many years.(5)

(5) Even with a 30 and 2 lock-in vesting rule, a mobile employee could end up with as many as 10 or 15 small deferred pensions. This would increase the volume and cost of record-keeping for employers, trustees and insurance companies; it could also be inconvenient for the pensioner, who might wish that all his cheques arrived together. Several ways might be considered for dealing with this situation. They are not examined here in detail, as they are clearly subordinate matters to be followed up only if a decision were taken to implement earlier vesting. They might apply in all cases where the deferred pension is either in respect of less than, say, eight years of service, or where it is less than some fixed dollar amount. They include:

- when the employee terminates his job, if an agreement can be reached between employee and employer about the present value of the deferred pension, the capital sum might be transferred to the employee's personal locked-in retirement savings vehicle (see Section 7 for more details regarding such a vehicle);
- at retirement, if the pensioner so requested, a 'post office-like' central agency (perhaps the Canada Pension Plan (CPP) and Quebec Pension Plan (QPP) administrations) would keep track of the pensioner's monthly entitlements. It would collect them and consolidate them into a single monthly cheque for the pensioner; or
- at retirement, a central agency (more than a post office in this case) would collect the appropriate capital sums from former employers, trustees or insurance companies in respect of all the small pensions for the individual pensioner. The central agency would then have full responsibility for the monthly pension cheque and for the appropriate investment of those capital sums.

In each of the above cases, there are significant technical and substantive issues that would require consideration. (It is possible that the advent of an electronic funds transfer system could play some role in coping with some of the technical difficulties.) The point to be noted here is that there are ways of cutting down substantially on any potential inconvenience for employers and pensioners associated with early vesting.

Apart from the requirement that plans adopt early vesting, and that vested benefits of terminated employees be updated, Option 1 calls for the vested benefits to be locked in - that is, members of contributory plans would not have the right to withdraw their contributions on termination of employment.

2. Revaluing Deferred Pensions of Terminated Employees. At a number of points in the report, it has been noted that deferred pension benefits provided to terminated employees are only rarely updated, with the result that such benefits are often worth very little when they come into pay - less in many cases than the annuity the member could have purchased with a return of his own pension contributions.

A system that provides for something close to full and immediate vesting, therefore, must be paralleled by provisions for the revaluation of the deferred pensions of terminated employees if reasonable equality of treatment is to be achieved as between the mobile and long-service worker.

Deferred pension benefits could be revalued by a price index. This would at least ensure that the purchasing power of a terminated employee's pension was not eroded by inflation.

While price indexing of deferred pensions would represent a substantial improvement over the status quo, it falls far short of the desired goal because it provides no allowance for increases in productivity - increases which would be reflected in rising benefits of an employee who remained within a single plan as a result of his rising earnings.

In the case of final and best average plans, reasonable parity of outcome could be achieved for the terminated employee through updating the value of his deferred pension by an index based on changes in average wages and salaries in the economy (AWS). With this measure, the pension income of mobile employees would likely still be somewhat less than that of members who stayed throughout their careers in one final or best average plan. But on average, the difference would not be great and would certainly be much less than that which prevails today.

In the case of career average and flat benefit plans, the deferred annuities of terminated members could be adjusted according to the principle that their value should be maintained at the level it would have been had the employee remained an active member. Thus, when career average and flat benefit plans are periodically updated for active members, the updating would be made to apply to the deferred annuities of terminated members.(6)

(6) In the case of career average and flat benefit plans, a rule of thumb might be required to give operational effect to the principle of updating. Whatever the rule adopted, it could conceivably include a provision that the updating not be less than that yielded by an adjustment based on the Consumer Price Index (CPI) or by the amount of inflationary earnings on the assets in question.

If the benefits of active plan members were enriched retroactively, deferred pensions should be similarly enriched in the case of all three types of plans.

Table VI-1 summarizes the proposed updating of vested benefits as it would apply to different types of plans. These measures should be required by legislation. The pension system would be made fairer and more effective by the adoption of the alternative shown in the right hand column.

Table VI-1

Updating of Accrued Benefits in Defined
Benefit Plans During the Pre-Retirement Period

	For Active Employees Under Present System	For Terminated Employees with a Vested Benefit Under Present System	For Terminated Employees with a Vested Benefit Under Option 1
Final or best average plans	updated automatically on the basis of increases in employee's wages or salaries	no(1)	updated by average wages and salaries
Career average plans	ad hoc	no	updated as for actives
Flat benefit plans	ad hoc	no	updated as for actives

(1)A few plans, such as that covering the federal public service, update deferred pensions of terminated employees by the CPI.

Table VI-2 provides an estimate of the cost of updating benefits of terminated employees by an index of AWS for the case of a contributory final average plan under different vesting standards. Two of those standards relate to both age and length of service and two to service only. (Under Option 1, the vested benefits of employees who have left career average or flat benefit plans would be updated on an ad hoc basis only, and this obviously precludes precise calculations. The data in Table VI-2 can, however, also be taken as indicative of costs for those career average and flat benefit plans that now regularly update their earnings bases for active workers.)

Table VI-2 shows that the increases in costs of revaluing deferred pensions are very sensitive to the average age and rate of turnover of the employee group. The upper half of the table shows the increase in cost for a group made up largely of older employees, who are less likely to leave their jobs; the lower half illustrates the increase for a relatively young and mobile employee group.

Table VI-2

Estimated Employer Current Service Cost of a Contributory 2%
Final Average Pay Plan With and Without Pre-Retirement
Updating of Vested Benefits of Terminated Employees

	(1)	(2)	(3)
Vesting Standard(1)	Vested Benefits of Terminated Employees Not Updated Pre- or Post-Retirement (% of payroll)	Vested Benefits of Terminated Employees Updated Pre-Retirement (only) by Average Wages and Salaries	% Increase in Costs from Column 1 to Column 2 %
Older Group with Low Employee Turnover			
45/10 Vesting	4.0	4.2	5
30/2 Vesting	4.0	4.5	13
0/10 Vesting	4.0	4.5	13
0/2 Vesting	4.0	4.5	13
Younger Group with High Employee Turnover			
45/10 Vesting	1.3	2.0	53
30/2 Vesting	1.3	3.8	192
0/10 Vesting	1.3	2.5	92
0/2 Vesting	1.3	4.0	207

(1)A 45/10 vesting standard indicates that vesting occurs when the employee is at least 45 years of age and has been a member of the plan for 10 years. A 10-year vesting standard indicates that vesting occurs when the employer has been a member of the plan for 10 years.

At first glance, it may seem surprising that the figures in Column 1 show no variation in cost with different vesting formulae. One would assume that, for a given employee group, earlier vesting would mean that employers would have to pay more pension benefits to more pensioners. The effect of this, however, appears to be offset to a surprisingly large degree because, for employees in the age and service group most affected by the formulae, a deferred pension is normally not worth more than the refund of their own contributions with interest. Thus, with earlier vesting, an increase in the number of deferred pensions and a decrease in the number of refunds of contributions with interest would mean that employers would have more funds with which to finance those additional benefits. This confirms the observation made in Chapter IV (and documented in Appendix 7) that in a contributory plan, ages of 40 to 50 must often be reached before an employer contribution is required to purchase the pension benefits earned by the employee.

In the top half of the table, the additional employer cost of more or less equalizing the treatment of active employees and vested workers who have terminated employment varies between 5 and 13%, depending on the vesting standard. The small percentage increases in costs shown in Column 3 reflect the fact that there are relatively few employees terminating and becoming entitled to deferred pensions. Were the plans

non-contributory, the percentage of payroll costs in Columns 1 and 2 would be higher, but the percentage increase in costs shown in Column 3 would be lower.

In the upper half of the table, the current service cost for the older and more stable workers, as shown in Column 1, is significantly greater than for the younger and more mobile group in the lower half - 4% of payroll, as opposed to 1.3%. The lower costs for the younger, more mobile group are the result of the fact that relatively few of them will remain in the plan long enough to actually receive a pension. Most will receive only a return of their own contributions with interest, or a deferred pension that is frequently not worth more than the refund.

The increases in costs are larger for the younger employee group than for the older group, as Column 3 of the table shows. Note, however, that these larger cost increases apply to original costs that were much lower. In all cases cited, the employer's pension costs are less for the younger group than for the older group. As would be expected, the differences narrow with earlier vesting standards. With vesting after two years, for example, the cost for the older group is 4.5% of payroll and for the younger group it is 4% of payroll. With early vesting and revaluation of deferred pensions, rates of employee turnover become less significant in determining the size of pension entitlements and their costs.

3. Maintaining the Real Value of Pensions-in-Pay and Life Annuities.

The real value of pension payments and the life annuities of elderly citizens should be maintained fully or to a substantial extent. The reasons that justify this position were set out in Chapter IV. (Note that the discussion below is principally in terms of pensions but applies to life annuities purchased by elderly people, e.g. those maturing an RRSP on retirement.)

It was also indicated in Chapter IV that an indexing requirement may pose problems for the employer in terms of added cost, and of the uncertainty and the volatility of costs. Accordingly, any requirement that employers must undertake contractually to maintain the real value of the pensions-in-pay (and, indeed, the earlier suggestions on deferred pensions) is likely to give rise to the following situations:

- some employers would discontinue their plans;
- some employers would attempt to comply, but find that the financial difficulties of their pension plan adversely affect their normal business activities. These employers may seek to reduce unit benefits or require higher employee contributions; and
- some employers would comply with little or no difficulty.

This disparate response is partly related to the fact that, although inflation transfers resources away from the pensioner by eroding the real value of pension benefits, it does not necessarily shift the resources to his or her former employer. Current employees, consumers of the products and services of the firm, and governments may all gain some of what the pensioner loses.

The particular circumstances of the employer are important in determining his response to the indexing of his pension plans. The more labour intensive the business of the employer and the higher the proportion of pensioners to active workers in his pension plan, the more difficult price indexing will tend to be. The smaller the employer and the more competitive the markets into which he sells his goods and services, the less likely it is that he will be able to cope with the risks. In addition, employers may gain or lose from an inflationary environment depending on their debt and inventory positions.(7)

If it is accepted that the real values of pensions-in-pay and of life annuities for the elderly should be preserved fully, or to a substantial extent, the question arises as to how this might be done. Alternative methods for achieving this result are discussed separately in Chapter IX. They are considered separately because they are of interest not only in the context of Option 1, being considered here, but also in relation to Options 2 and 3 to follow. These alternatives fall under two broad headings:

- those that require full price indexing of pension payments, in which case government would provide some form of protection to pension fund investment portfolios against the risks created by inflation; and
- those that provide that pension payments be updated automatically on the basis of the investment performance of the employer's pension fund, or some hypothetical fund. The idea here is to update pension payments by an amount that is, or might be judged to be, the inflation premium within the investment return earned by the pension fund.

Therefore, without spelling out the precise nature of the legislative measure required, Option 1 would involve legislation establishing rules under which the value of pensions-in-pay would be adjusted automatically for inflation; and to maintain equity between those who had been pension plan members, and those who had not, similar arrangements should be available to non-members who choose to provide for their old age by the purchase of a life annuity.

4. Age of Entitlement to Benefits. Plan provisions whereby long-service employees may decide unilaterally to retire on an actuarially unreduced pension at an age earlier than the normal pensionable age of the plan provide more benefits per dollar of contributions for early retirees compared to those who retire at the normal pensionable age.(8) While some employers may consider such provisions as one instrument of their

(7)As borrowers, governments also have their fiscal position affected by inflation. In addition, inflation shifts purchasing power to governments to the extent that they have tax bases that have an elasticity greater than 1.0 relative to inflation.

(8)See Chapter IV and Appendix 7.

personnel policy, it seems inappropriate that an employer's goals should be met through the use of a pension plan to which all employees contribute - directly or indirectly. Consequently, Option 1 calls for the phasing out of such provisions. All other things being equal, this would have the incidental, but not insignificant, advantage of reducing plan costs.

The aim of this measure is to eliminate the differences in treatment between plan members inherent in such arrangements and to remove the financial incentives for retirement before the normal pensionable age. Several points should be noted about this proposal. Firstly, it does not preclude variations in the normal pensionable age from one occupation to another or one plan to another. Secondly, it does not prevent an employer from retiring an employee on an actuarially unreduced pension before normal pensionable age because the latter is no longer considered sufficiently productive, or because the mine or factory in which he is working is to be closed. In these cases, the cost differential between the unreduced and reduced pension should be a direct charge on the employer, and not on the pension fund. Thirdly, this proposal could be modified to allow for retirement before normal pensionable age on an actuarially unreduced pension in circumstances of ill health or disability, although these contingencies could also be provided for through disability insurance or other arrangements. Fourthly, provisions for early retirement on an actuarially reduced basis would not be affected.

For the sake of consistency and equitable treatment, this proposal also implies that employees who continue to work after the normal pensionable age should have their pensions augmented by an improved benefit formula which would recognize the shorter period over which their pensions would be paid. Such an improvement in the benefit formula would be in addition to the higher pension that would result from longer service and higher earnings. Failing an improvement of this nature in the benefit formula for those retiring after the normal pensionable age in the plan, employees retiring at the normal pensionable age would enjoy an advantage. A question that requires consideration, however, is whether such an approach should be adopted in cases where the normal pensionable age of a particular plan is well below the normal retirement age in the rest of the economy.

The implementation of this proposal, like the earlier ones relating to portability, would narrow the differences in treatment between employees that are related to the length of their service with one employer. In addition, the scope for employers to use their pension plans to achieve objectives other than those related to employee retirement income would be reduced.

5. Post-Retirement Survivorship Provisions and Pension Splitting.
Legislation should require that all pension plans have a two-thirds post-retirement survivorship provision. The high incidence of poverty among female survivors, the likelihood that the proportion of female survivors among the elderly will increase over time, and the unevenness of treatment of survivors in current employer plans all suggest

the need for legislation. In comparison to plans now providing a single life pension payable for life, with a guaranteed minimum of five years' payments in any event, the addition of a two-thirds continuance of benefits to the surviving spouse of plan members would generally increase the employer's pension plan costs by one to two percentage points of payroll. If the provision called for a reduction to two-thirds on the first death of either the member or the spouse, the additional cost is estimated to be somewhat lower. (See Appendix 4.)

In addition, it is suggested that pension credits or accumulations established during the period of a marriage should be divided between spouses in the event of its breakdown. Since pension rights are a form of financial asset, such a proposal is consistent with trends in Canadian law and jurisprudence requiring a sharing of family assets as part of a divorce settlement. Such a change would help to reduce the high incidence of poverty among elderly Canadian women. It is also consistent with provisions in the CPP and QPP which require splitting of credits accumulated under the plans in the event of marriage breakdown. Whether this provision should be implemented through amendments to pension benefits legislation or through legislation relating to the family is a matter requiring further consideration. Consideration of the administrative requirements, which may be extensive, is also required.

6. Final Average and Best Average Pay Plans. Pension plans based on final and best average earnings should be discouraged.

At present, a retiring member of a final average or best average pay plan receives a pension benefit based on his highest average salary or his average salary over the last few years of work. This creates the kinds of differences in treatment of similar individuals within a single plan that were described earlier. The deferment of similar amounts of consumption before retirement by individuals with different earnings paths can produce significantly different benefits in retirement. Efforts should therefore be made to discourage the use of these types of earnings bases.⁽⁹⁾ Employers who provide earnings-related pensions should choose earnings bases which take account of their employees' earnings in most of their years of work. Earnings bases of the C/QPP type are one illustration. It is to be emphasized that replacing final or best average earnings bases need not affect the average size of pensions, nor make it more difficult for pension formulae to adjust

(9)See Chapter IV and Appendix 7. For those who judge it appropriate to pool the risks associated with uncertain future earnings profiles, the arguments in the above text may not be persuasive. For instance, take two people, A and B, who begin work at the same time and are members of the same best average pension plan. If A enjoys more rapid promotion toward the end of his career than B, A will receive a significantly larger pension than B, even though their actual contributions were almost identical. It is possible to view the advantage to A as a reflection of risk pooling of uncertain future earnings paths. The view reflected in this report is that such pooling of the risks of uncertain future earnings profiles is not appropriate. In particular, in a pension plan which includes occupational groups with earnings profiles that are typically dissimilar, the risks being pooled are unequal.

pension accruals automatically for inflation and general productivity growth. Replacing final and best average earnings bases with other earnings bases could be undertaken in a way that would simply make the distribution of pension benefits among plan members more equitable in this respect.

Those who would be affected most by this change are those employees who enjoy substantial upward mobility during their careers, and who in the existing system appear to be effectively 'subsidized' by those with less upwardly mobile careers. Of course, if these differences in treatment were reduced, employers might adjust other elements in their compensation policy, but this would simply make more explicit the actual amount of their total compensation to various employee groups.

7. Coverage. The large gaps in the coverage of employer-sponsored pension plans are accounted for largely by small- and medium-sized firms in the private sector. Earlier sections of this report suggested several reasons why this gap exists and why, under existing circumstances, it is likely to remain.

Pension plan coverage could be expanded through the encouragement of employee-sponsored pension-type arrangements which this report terms a Registered Employee Pension Fund (REPF). Broadly similar in concept to current RRSP arrangements, they would differ in two respects. Firstly, employers would be allowed to contribute to REPFs on a tax-deductible basis. Secondly, employer and employee contributions would be locked-in until, say, age 60. An annuity could commence between the ages of 60 and 71 under the same options now available for RRSPs. The REPF would be similar to an RPP of the money purchase kind, except that employers would have no responsibility or involvement other than to send a monthly cheque to the financial intermediary designated by the employee.

With such a provision, employees not covered by an employer-sponsored pension plan would be able to take the initiative in providing for their own pensions. While employers would not be required to contribute, the existence of REPFs might provide employees with a means of bargaining for an employer contribution.

It should be noted that for those employees who have low incomes and/or for those who expect to spend significant fractions of the pre-retirement period outside of the labour force, such plans may not be to their advantage. To the extent that these people do save, they are better off doing so outside of vehicles registered for tax purposes.(10)

REPFs might not make a major difference to the pension coverage problem, but such a vehicle could be of significant benefit to some Canadians and, therefore, its establishment should be carefully considered.

(10)See Chapter IV for further details.

B. Summary of Measures

In summary, the principal measures associated with Option 1 are as follows:

- early vesting of benefits, with vested benefits to be locked-in. At the employer's option, a locked-in, double refund of employee contributions could be paid to those terminating employment with less than five years of service;
- vested benefits of an employee terminating from a final average or best average plan to be revalued between the termination date and the normal pensionable age in the plan by an appropriate wage and salary index;(11)
- vested benefits of an employee terminating from other types of defined benefit plans to be updated by an amount no less than the amount by which the benefits would have been updated had the employee remained at the same job;
- pensions-in-pay to be indexed to prices, or other measures that will preserve in substantial part the real value of such pensions;
- elderly citizens who do not have substantial income from employer-sponsored pension plans to be given the opportunity to purchase life annuities whose real value is preserved fully or in substantial part;
- abolition, by legislation, of those provisions that enable long-service employees to decide unilaterally to retire before the normal pensionable age in their plan on an actuarially unreduced pension;
- legislation of mandatory post-retirement survivorship provisions and splitting of pension credits or accumulations on marriage breakdown;
- encouragement (but not compulsion by legislation) to eliminate final and best average earnings bases, and to replace them with earnings bases that provide more equal treatment of those with different career earnings paths and that afford equally good or better protection against inflation; and
- promotion of employee-initiated coverage through REPFs.

(11) If the earnings bases of final average and best average plans are replaced by earnings bases that provide more equal treatment of those with different career earnings paths, this specific suggestion would be redundant.

C. Moral Suasion vs Legislation

While moral suasion has the merit of minimizing government involvement, it is assumed that legislation would be necessary for successful implementation of much of this option.

The changes respecting vesting, the revaluing of vested benefits (deferred pensions) of terminated employees, and post-retirement adjustments clearly require legislation. Since minimum vesting standards are already set out in provincial and federal pension benefits legislation, new standards would require amendments to those statutes and hence the cooperation of all governments concerned. Revaluation of vested benefits of terminated employees, together with earlier vesting, would provide a reasonable degree of pension portability, overcoming what has been acknowledged for many years to be a weakness in the present employer-sponsored system. Since employers normally have little reason to be interested in former employees, and must be concerned to maintain cost competitiveness, lack of progress on this front is not surprising. As a minimum, employers are likely to be unwilling to improve these benefits unless they can be sure that their domestic competitors would be required to do likewise. The same is broadly true of the situation respecting post-retirement adjustments. With regard to these three measures, therefore, amendments to pension benefits standards legislation in all jurisdictions having such legislation is necessary for the success of Option 1.

The introduction of REPFs, described earlier, would require amendments to the Income Tax Act.

With respect to the suggested changes regarding final and best average plans, and provisions for early retirement on an actuarially unreduced pension, the choice between moral suasion and legislation is less clear. One view is that since the differences in treatment occasioned by these design features affect the relative treatment of individuals within a plan, government action should seek only to inform plan members of the effects of such provisions - leaving members to challenge the arrangements if they wish. The opposite view is that legislative prohibition of these provisions is necessary because most employees cannot know, at any point in time, whether or not such provisions would be to their long-run advantage. This report adopts this latter view in relation to the matter of early voluntary retirement on actuarially unreduced pensions. With respect to the earnings base question, however, it is suggested that legislation proscribing final and best average bases is not necessary.

The case for legislating post-retirement survivorship provisions is based simply on the strong public interest in ensuring that pension benefits are made available to the elderly spouses of deceased pensioners. The case for legislation requiring the splitting of pension credits on marriage breakdown is based particularly on the need to eliminate poverty among elderly females and also on the considerations of equity that lie behind the trend in Canadian law, which increasingly requires family assets to be shared in the event of marriage breakdown.

D. Case For Option 1

The main argument in favour of Option 1 is that the allocation of benefits from the employer-sponsored system would be fairer than it is now. By requiring some design features and proscribing others, differences in the treatment of employees with different mobility patterns would be narrowed, and a higher proportion of total pension benefits would flow to surviving spouses and to non-working partners of broken marriages. Whether price indexing or some other alternative is legislated to preserve real values of pension-in-pay, the future shift of resources from pensioners to others in the economy as a result of the erosion in the value of benefits through inflation would almost certainly be smaller than at present.

E. Case Against Option 1

The case against Option 1 rests in large part on the fact that the coverage of Canadian workers under the employer-sponsored pension system would remain far from complete. Indeed, coverage might decline, despite the availability of employee-initiated REPFs, since some employers might choose to phase out their plans rather than incur the higher costs and closer regulation involved. Also, some employers might react to the higher costs by reducing the overall benefit formula of their plans.

Among those covered, treatment would likely also continue to vary with the strength of the employer. Only some employees would enjoy pension arrangements in which they could be sure that accruing pensions would keep up with productivity advances. Others would remain vulnerable, with pension accruals updated on an ad hoc and partial basis only.

Generally speaking, many of the future elderly would continue to have significantly lower levels of well-being after retirement than before - that is, the amount of income produced by the system would very likely continue to be insufficient.

F. Costs

There is no simple way of characterizing the effect of Option 1 on employer pension costs. However, if it turned out, as suggested above, that the amount of pension income produced did not increase significantly, then costs to employers in aggregate would obviously not rise significantly. The principal result would be a reallocation of benefits among various employee groups.

The effect on individual employers, however, would vary widely. The cost of reforms outlined under this option for an employer whose plan already embodies most of these provisions would be small, whereas for many others it would be large - if there were no offsetting reductions in the general level of benefits. Table VI-3 provides an estimate of the incremental employer current service cost of the first four items

listed in Section B for an employer sponsoring a contributory 2% final average pay plan. The assumptions underlying the cost estimates are the same as those adopted elsewhere in this report and outlined in detail in Appendix 4. No estimate is made of the cost of extending the benefits to the past service of pensioners or current plan members. As in Table VI-2, the cost effect differs for an employer with an older and more stable employee group as compared to one with a younger and more mobile group. The results in this table parallel those in Table VI-2, except that those in Table VI-3 also include an estimate of the cost of post-retirement indexing.

Table VI-3

Estimated Employer Current Service Cost of a Contributory 2% Final Average Pay Plan Under Varying Vesting Provisions and with Pre- and Post-Retirement Indexing(1)

	(1)	(2)	(3)
Vesting Standard	Current Plan Without Indexing	With Indexing Pre- and Post-Retirement	% Increase in Costs from Column 1 to Column 2
	(% of payroll)		%
Older Group with Low Employee Turnover			
45/10 Vesting	4.0	6.2	55
30/2 Vesting	4.0	6.6	65
(% Increase)	(0)	(6)	
Younger Group with High Employee Turnover			
45/10 Vesting	1.3	3.0	131
30/2 Vesting	1.3	5.5	323
(% Increase)	(0)	(83)	

(1) Pre-retirement indexing of deferred vested pensions for terminated employees in line with a wage and salary index; post-retirement indexing of all pensions to a price index.

Depending on vesting requirements, pre- and post-retirement indexing raises costs for employers with an older and relatively stable employee group by between 2.2 and 2.6 percentage points of payroll, equivalent to between 55 and 65% of employer pension costs. For employers with younger and more mobile employees, the cost increases vary more, depending on the vesting provisions. With a '30 and 2' vesting rule, the percentage increase in cost is very large, although it should be noted that the employer costs in that case remain less than for the employer with the older, less mobile group of workers.

The remaining compulsory elements of Option 1 would also affect costs. Eliminating provisions under which long-service employees can receive an actuarially unreduced pension before normal pensionable age would work in the direction of reducing costs. On the other hand, a two-thirds post-retirement survivorship provision would add to employer costs by an amount in the range of one to two percentage points of payroll.

The higher employer costs associated with Option 1 reforms of this type could, and in many cases would, be offset in one or more of the following ways: reductions in the unit benefit provided in the plan; higher employee contributions; a higher normal pensionable age in the plan; and smaller increases than would otherwise occur in other forms of employee compensation. For example, a 2% final average pay plan calling for employee contributions of 5% of wages or salaries might be changed to an indexed 1 1/2% final average plan requiring a 6% employee contribution.

G. Implementation/Phase-In

The nation wide implementation of the Option 1 measures would require federal-provincial cooperation, since most employer-sponsored plans fall under provincial jurisdiction. As a federal objective has been to encourage a significant degree of uniformity in pension legislation, a consensus among the governments with pension benefits legislation would be needed. If and when intergovernmental agreement was reached, and both federal and provincial legislation passed, the considerations involved in implementation of this option would have to take account of the following practical considerations.

1. Administration. From an administrative viewpoint, the proposed changes in vesting and locking-in requirements could be implemented quickly, once employees and pension plan administrators had been informed of the impending change. The same is essentially true of proposals relating to the automatic revaluation of vested benefits of terminated employees and of the specific measures decided on in respect of post-retirement adjustments.

The elimination of provisions that enable long-service employees to decide unilaterally to retire before the normal pensionable age in their plan on an unreduced pension could be applied immediately to new employees. Applying it to present employees would raise serious questions that are discussed later.

2. Financing. Employers would need to estimate the effect of the total legislative package on their pension plan costs. Since the improvements that would be associated with this option would raise plan costs (if nothing else were changed), enough time would have to be allowed to determine whether, and by how much, other features in the plan were to be cut back. Employer-employee negotiations, formal or informal, would be required. A prerequisite to such negotiations would be detailed cost estimates. It is not difficult to envisage that this process could take 18 months to two years.

Any additional liabilities incurred by the pension funds as a result of the vesting changes would have to be amortized in accordance with the relevant pension benefits standards legislation. This need not delay implementation.

The cost data cited earlier in this chapter assume that the revaluation of vested benefits of terminated employees and the substantial maintenance of real value of pensions-in-pay would apply only in respect of benefits earned in the future. Costs would be higher, of course, if any retroactivity were contemplated. It should be added that there would likely be strong pressure for retroactivity on behalf of those with deferred and current pensions if those pensions had not already been adjusted to a substantial degree for the inflation that had occurred since their nominal values were first established.

3. Employer-Employee Relations. All of these areas of change will have an impact on employer-employee relations. There may be some employee objections to the change in rules locking in employee contributions. The elimination of the special provisions for early retirement on an actuarially unreduced pension are even more likely to cause concern. In many plans, the special early retirement provision would be regarded as a condition of service which could not be unilaterally altered. Accordingly, it may well take some time to phase in all the proposals.

H. Summary Evaluation of Option 1

The following terms will be used to grade the policy options outlined in this chapter and the chapters that follow, in relation to the seven evaluation criteria discussed in Chapter IV: 1. poor; 2. barely passable; 3. passable; 4. good; 5. very good. This format is followed below in respect of Option 1.

1. Replacement Income. The current employer-sponsored system fares poorly on this criterion.⁽¹²⁾ Under Option 1, with more equitable treatment of mobile employees and those with frequent changes in their labour force status, a higher proportion of plan members might be able to accumulate something approaching a more adequate amount of replacement income than is now the case. The availability of REPFs might also make a modest difference. But since coverage is not mandatory, and since there is no minimum size of plan, Option 1 rates only as barely passable.

⁽¹²⁾The ratings for the current system and the four main policy options are summarized in Chapter XI.

2. Fairness. Option 1 would reduce current inequities due to program design and poor portability. It would also help to reduce the effect of inflation on the elderly. Therefore, it is rated as passable, a substantial improvement over current arrangements, which are graded poor.

3. Economic Effect. To the extent that the design features currently in employer plans may, in the future, have the effect of reducing potential labour force participation by people who are in their 50s and early 60s, Option 1 might afford a marginal improvement over current arrangements. This is unlikely to be a significant consideration. Option 1 would also reduce artificial barriers to labour mobility. With respect to their overall economic effect, Option 1 and current arrangements are both considered passable to good.

4. Personal Choice. On the comparative rating scale, current arrangements are barely passable from a personal choice perspective. Employee-initiated REPFs would improve personal choice slightly, but not enough to change the rating. Although many types of plans are allowable under this option, few would provide substantial discretion to employees.

5. Dignity of, and Respect for, the Elderly. The overall effect here would be to improve the situation somewhat over the poor rating for current arrangements. This is because more of the elderly would have greater grounds for confidence with respect to the preservation of the real value of their pensions; they would not have to rely on employer 'generosity' for periodic updates. Option 1 is graded passable.

6. Understandability. Option 1 contemplates a continuation of most of the many types of plans that now exist. Some standardization is, however, involved. Accordingly, the difficulty in understanding current arrangements would be somewhat lessened. A barely passable rating is given, which is higher than the poor rating for current arrangements.

7. Administrative Ease. Option 1 does not change current arrangements significantly. A multiplicity of plans would remain. The rating is again barely passable - the same as for current arrangements.

CHAPTER VII

OPTION 2: REPLACEMENT OF DEFINED BENEFIT PENSION PLANS BY DEFINED CONTRIBUTION PLANS

A. Description of Option 2

Chapter VI suggested ways of making the current employer-sponsored pension system fairer and more effective. Some might argue that employers would resist such changes on the ground that they would entail excessive government intervention in relation to defined benefit plans. Consequently, it would be far simpler to overcome the uncertainties and inequities associated with such plans by eliminating them.

Option 2 recognizes these arguments by eliminating defined benefit pension plans. Under this option, employer-sponsored pension plans would not be mandatory, but those employers wishing to offer pension plans would either have to offer defined contribution plans or contribute to Registered Employee Pension Funds (REPFs).

Under a defined contribution plan, a regular contribution is made to the plan by an employer. A contribution may also be made by an employee. The benefits paid out to a pensioner under the plan are determined by the size of the contributions that were made by and on his behalf, the return earned on investment of the accumulated funds, and the terms of the annuity or annuities purchased. REPFs, which were described in Chapter VI, constitute a possible new type of pension arrangement that might be established.

Under Option 2, vesting would be full and immediate; the annuity purchased at the time of retirement would have to include a two-thirds survivorship provision in the case of married participants; the real value of the annuity would be substantially preserved; and in the event of marriage breakdown, pension accumulations would, in respect of the marriage period, be divided between spouses.

In these latter three respects, Option 2 is similar to Option 1. A transition period of some years would be required for the implementation of this approach and great care would have to be taken to protect the acquired rights of employees.

Any proposal involving a move towards the exclusive use of defined contribution plans must be considered in the light of the reasons why such a small proportion of pension plan members are now covered by such plans. Indeed, the trend in Canada and elsewhere over the last 30 years has been away from defined contribution plans. Despite the ease with which they are understood and administered, and despite the fact that they provide for equal treatment of employees, plan after plan has been shifted from defined contribution to defined benefit, and the trend continues.(1) Money purchase arrangements - the most common type of defined contribution plan - are found today mainly among small employers, who seek both to avoid the risk that pension costs will be higher than planned and to minimize administrative expenses. The shift away from such plans is linked to the perception of employees that defined benefit plans provide them with greater economic security - security judged to be lacking in money purchase arrangements which make no promises as to the magnitude of the benefits to which employees will be entitled in retirement.

B. Case for Option 2

There are a number of advantages of Option 2. Under the present system, some people have pensions from former employers that are protected against an uncertain economic future, while others have retirement incomes from former employers or personal savings that are not afforded such a guarantee. Under this option, by contrast, everybody is treated similarly. Inflationary adjustment prior to retirement would be a function of the response of rates of investment return to inflation, and post-retirement pensions would be adjusted in line with one of the four approaches for a government-facilitated system outlined in Chapter IX.

- (1)One exception to this statement that is particularly noteworthy is the Government of Saskatchewan plan. In 1977, the Government of Saskatchewan instituted a new money purchase plan for its employees. New employees must join it. Those who were employees prior to that date, however, had the choice of continuing in the old defined benefit plan or switching to the new money purchase plan. Few complications appear to have developed, which is not surprising. Older employees, whose employment with the Saskatchewan government predates the change, will fare well under the existing defined benefit plan and can remain in it. Young employees may well switch to the money purchase plan, under which they may judge they are likely to be treated better, particularly if they anticipate changing employers. For those currently young who continue to be employed by the Saskatchewan government, however, it is less certain that, as they approach retirement, they will remain satisfied with the money purchase arrangement. Since the plan does not provide them with pension benefits that have a fixed relationship to their pre-retirement earnings, their satisfaction will be determined ultimately by the rate of return that is earned on the assets of the pension fund.

A second advantage of defined contribution arrangements is that they do away with most of the arbitrary differences in treatment of people in similar situations - differences found in many defined benefit plans. Arbitrary differences in treatment are avoided between mobile and stable employees (portability is easily assured), between those who retire early and those who do not, and between people with different lifetime earnings profiles.

A further advantage is that this system is easier to administer and to understand than the defined benefit system. Simplicity is its hallmark.

From the employer's point of view, another advantage is that during the pre-retirement period of pension accrual, he would bear no risk of greater than expected pension costs. It has also been argued that the desirability of employee contributions is more readily accepted in the case of defined contribution plans than that of defined benefit plans because the amount of the eventual pension is seen to be more dependent on the total amount of contributions.(2)

Under Option 2, it would be practicable and, indeed, desirable to allow employees (or their representatives) a substantial role in the investment of their pension funds. Some unions are now pressing for this right. Such involvement would be not only acceptable, but logical, because in defined contribution arrangements investment risks are borne directly by the employees.(3)

C. Case Against Option 2

Defined contribution plans place upon employees the full burden of the unknown future in respect of the portion of their retirement income arising from such plans. If investment returns decline or inflation erodes the value of their assets in the pre-retirement period of accrual, employees suffer. Fluctuations in investment returns also mean that people retiring only a few years apart, whose accumulations are similar, could end up with significantly different pension incomes.

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- (2) An exchange of views over the relative advantages and disadvantages of defined contribution and defined benefit plans was published in Benefits Canada, Vol. 3, No. 3. Thomas A. Dancy of the Manufacturers Life Insurance Company, arguing against defined benefit plans, maintained that the contribution levels of employees tended to become fixed in the case of defined benefit plans and that the employer is expected to cover the full cost of future improvements in the plan.
- (3) In the exchange of views referred to in the previous footnote, Murray Segal, arguing against defined contribution plans, maintained that the "fundamental and insurmountable deficiency of a defined contribution plan is that it leads to a most inefficient allocation of pension benefits". Employees who joined such a plan at an early age received benefits on retirement that were disproportionately large compared to those received by employees joining the plan at a later age.

Since defined contribution plans do not provide an explicit link between pre-retirement earnings and post-retirement income, they are potentially less effective than defined benefit plans for delivering retirement incomes bearing some planned relationship to pre-retirement earnings. Option 2 shifts the burden of future uncertainty on to the individual. A further substantial objection is that Option 2 would involve major changes to the existing employer-sponsored pension system. It will be recalled that 95% of covered employees are now in defined benefit plans. In this regard, Option 2 would be seen as a massive step away from the type of plans that employees, and their unions, appear to prefer.

D. Costs

Of the various measures associated with this option, only the requirement of full and immediate vesting would add to costs. Table III-16 showed the employer costs of the contributory 5% money purchase plan to be some 3.2% of payroll on the assumption of a '45 and 10' vesting rule. The employer cost is under 5% of payroll partly due to the C/QPP integration formula assumed and partly because the employer is able to apply his own contributions in respect of terminated employees, and the interest earned on them, to reduce his contributions in respect of long-service employees. With full and immediate vesting, employers would no longer be able to recapture their own contributions. As a result, plans with employer contributions in the 3.2% range would entail costs of around 4%.

The requirements that pensions-in-pay be indexed, that there be survivorship provisions, and that pension accumulations be divided on marriage breakdown, would affect only the timing of annuity payments (the payment schedule for indexed and unindexed pensions would differ) and their distribution (surviving spouses and divorced spouses would receive relatively more); but these requirements would entail no added costs.

E. Implementation/Phase-In

If Option 2 were selected, defined contribution plans for new employees could be introduced with relatively little delay. The existing defined benefit plans could be phased out gradually during the working lifetime of the present members of the existing plans. In this case, members of such plans would continue to earn defined benefits so long as they remained in the same plan, but new entrants to the labour force, and others who were not members of defined benefit plans when the legislation was passed, would be unable to join. Alternatively, the transition might be implemented within a shorter period of time through agreement between the federal and provincial governments.

F. Summary Evaluation of Option 2

The essence of this option is that it would fundamentally change the employer-sponsored pension system from one that makes promises to plan members concerning their future income to one that acts for members solely as a tax-assisted vehicle for personal saving. This option is based on the premise that the employee, rather than the employer, should bear the risks associated with the unknown future during the pre-retirement period.

The conclusions, in relation to the evaluation criteria, are noted next.

1. Replacement Income. Replacement income is graded as barely passable in relation to the adequacy standard described earlier. With incomplete pension coverage, many people would enter retirement with little or no pension income. The rating would be lower, but for the full and immediate vesting the option provides to those covered.

2. Fairness. The savings option is rated as good in terms of fairness. This rating reflects the fact that all covered employees are treated equally and that the design problems associated with defined benefit plans have been eliminated.

From the fairness perspective, however, one concern remains. It is quite possible for the market value of a portfolio of securities to vary substantially over relatively short time frames. Thus, individuals retiring from a plan only two or three years apart, who had made similar contributions, could have very different amounts available to them from the plan with which to purchase an annuity. It is for this reason that Option 2, while it is rated well above current arrangements (rated poor), does not score higher on the fairness scale.

3. Economic Effect. The economic effect of this option is considered very good. It creates no problems relating to uncertainty or volatility of costs for individual employers. Any barriers to labour mobility associated with defined benefit plans would be eliminated as a result of the full and immediate vesting provision. Any substantial effect on the capital stock is unlikely. In contrast, current arrangements and Option 1 are rated passable to good.

4. Personal Choice. Although saving devices have the potential for more personal choice, the option, as outlined here, does not constitute an improvement in this respect. This is because it remains possible for an employer to require employee participation in a plan as a condition of employment. The funds in the plan are also locked in. The rating, therefore, is barely passable, which is on a par with current arrangements.

5. Dignity of, and Respect for, the Elderly. The conclusions here are similar to Option 1 - passable. Current arrangements are considered poor.

6. Understandability. Option 2 receives a good rating from this perspective. People would find it much easier to understand the nature of the plans than is now the case with defined benefit arrangements. Furthermore, people moving from one plan to another would be moving between essentially similar arrangements. The multiplicity of types of arrangements now encountered would no longer exist.

7. Administrative Ease. The rating here is good. Individual plans would be simple and, hence, relatively easy to administer. For instance, there would be little need for actuarial assistance.

CHAPTER VIII

OPTION 3: MANDATORY EMPLOYER-SPONSORED PENSION PLANS

A. Introduction

Option 3 and Option 4 (larger public plans) both involve an enlargement of Canada's present earnings-related pension system on a mandatory basis. Whereas under Options 1 and 2 employers would be free to decide whether or not to offer their employees a pension plan, under Option 3 all employers would be required to establish pension plans and all employees would be required to join them. The rationale for this mandatory approach was discussed in Chapters I and V.

Under Option 3, employer-sponsored pension plans, in conjunction with the Canada and Quebec Pension Plans (C/QPP), would be required to provide benefits designed to replace 40-45% of pre-retirement income up to one and one-half times average wages and salaries (AWS). Earnings above that level could continue to be covered by pension plans on a voluntary basis. The enlarged mandatory system would require that employers offer a standard defined benefit plan, a standard defined contribution plan, or a combined standard defined benefit and defined contribution plan.

B. Types of Standard Plans

Table VIII-1 and the list that follows set out the basic features of the three standard plans that might constitute a mandatory employer-sponsored pension system. (Many important design questions - such as the variation to be allowed with respect to the normal pensionable age - are not dealt with in the brief discussion which follows. But if Option 3 were chosen as the basis for government policy, they would require consideration.)

Table VIII-1

Principal Characteristics of Standard Mandatory Plans

	Plan A	Plan B	Plan C
Type of plan	defined benefit	defined contribution	half defined benefit half defined contribution
Financing	employer and employee contributions	equal employer and employee contributions	defined benefit portion paid for by employer, and defined contribution portion paid for by employee
Benefit	1% unit benefit based on revalued lifetime earnings with pensions indexed to substantially preserve real values after retirement; integrated with C/QPP	the annuity that the accumulation will produce	0.5% unit benefit for defined benefit portion as in Plan A, plus the annuity that the defined contribution asset accumulation will produce
Earnings covered up to	1.5 average wages and salaries	1.5 average wages and salaries	1.5 average wages and salaries
Normal pensionable age	65	65	65

Whichever of the three alternatives an employer chose to offer, the plan would be required to:

- cover all full-time employees;(1)
- provide for full and immediate vesting, and for the locking in of employee contributions;

(1)For purposes of the cost estimates in this chapter, all employees automatically participate in a standard plan at age 21. However, this working assumption ignores important questions that would require consideration if this option were to be implemented. These questions include: should part-time employees be covered; should young employees be covered; and should low-income earners be covered? Only the latter question is discussed in this report.

- index pensions-in-pay to a price index or to any other legislated standard chosen to substantially preserve real values (see Chapter IX);(2)
- provide for a two-thirds continuance to a surviving spouse and the splitting of pension credits on marriage breakdown (see Chapter XVI); and
- fund the benefits in advance.

In the case of defined benefit plans, provision would also be made for automatic revaluation of vested benefits of terminated employees on the basis of a wage and salary index. To ease administrative requirements, those with less than five years of service could, at the employer's option, receive a double refund of contributions, rather than deferred pensions, with the proviso that the refund be locked into another retirement income vehicle.(3)

An essential characteristic of a mandatory, employer-sponsored pension system is that thousands of mainly small employers who do not now offer pension plans would be required to do so. The reasons for the current non-participation of many employers were discussed earlier. In the main, these reflected the concern of such employers to avoid the additional costs of providing a pension plan (particularly the more risky defined benefit type of plan), the administrative expense, and the inconvenience. Under Option 3 the coverage ratio of full-time paid employees aged 25 to 64 in the private sector, which is now around 50%, would approach 100%.

Option 3 has been designed to reduce at least some of these difficulties. Firstly, employers wishing to avoid the risk of defined benefit plans could simply offer Plan B - the standard defined contribution plan. Secondly, for those employers who chose to offer Plan A or C, the administrative burden of keeping track of many terminated employees arising out of the full and immediate vesting requirement would be reduced by allowing the employer to provide a double refund (plus interest) of employee contributions to terminating short-service employees. Finally, employers in industries characterized by many small firms could, as now, join together to offer multi-employer plans.

(2)Any individual purchasing an annuity with the proceeds of a Registered Retirement Savings Plan (RRSP) accumulation would also be entitled to have some access to any government plan that facilitated the preservation of real pension values. See Chapter IX.

(3)The cost estimates later in this chapter are based on a double refund of contributions with full interest in all cases; the difference in all cases from the arrangement described above would be small. The employee would be required to transfer any refund into another Registered Pension Plan (RPP), a Registered Employee Pension Fund (REPF), or a locked-in RRSP.

If the Option 3 approach were adopted, most large employers would probably continue to provide defined benefit plans - if only because of the employee resistance they would likely encounter if they sought to establish an alternative - but the great majority of smaller employers would probably choose to offer defined contribution plans. Given the anticipated preference of such employers for defined contribution plans and the locked-in, double refund feature of defined benefit plans, it is estimated that perhaps as much as one-half of the pension income from the mandatory arrangements might eventually be generated under defined contribution and other saving-type (e.g. RRSP) arrangements.

It might be noted that the governments of both the Netherlands and Switzerland are developing legislation to require the establishment of private pension plans. In France, Sweden and Finland, arrangements of this type have existed for some time.

In both the Netherlands and Switzerland, there was general agreement on what the end product should provide in terms of benefits. In the Netherlands, the objective was the provision after 40 years of service of total retirement benefits - including those from the public social security system - equivalent to around 70% of final gross salary. Provision was also made to extend benefits to the surviving spouse and to orphans, and to index all benefit payments to increases in the cost of living. In Switzerland the target was gross retirement benefits, including social security, after 40 years of service, of 60% of final earnings up to a level of approximately one and one-half times the average industrial wage. Survivor's and disability benefits are also to be included. Benefits will be adjusted at least in accordance with the cost of living index. Supplementary plans will remain available on a voluntary basis in both countries for employees with higher incomes.

The financing arrangements for the mandatory plans in these countries have not yet been completed. They are likely to be complex, however, as a result of their objective of establishing an equitable method of distributing costs among employers whose work forces have varying age and earnings characteristics. In Switzerland, it is proposed that the post-retirement inflation adjustments be financed virtually on a pay-as-you-go basis.(4)

Two major questions that arise in relation to Option 3 are whether enlarged mandatory plans should cover people with very low earnings and, if so, whether their pension contributions for this enhanced coverage ought to be subsidized in some way. However, because these issues are relevant not only to the consideration of Option 3, but also of Option 4 (enlarged public plans), they are considered separately later in this report.

(4)As noted earlier, this would be similar to the situation permitted in Ontario under existing pension benefits legislation.

C. Case for Option 3

The general rationale for mandatory arrangements was set out in Chapter I, where the objectives of government involvement in the retirement income system were discussed. Although fully germane to Option 3, it is not repeated here.

The specific case for Option 3 is that a 'patch-up' of the current system, as in Option 1, would be too uncertain of results. For instance, even with the minimum conditions required under Option 1, some employers might terminate their plans; and even if such a decision were accompanied by upward wage adjustments, there is no guarantee that the incremental earnings would be set aside for retirement by employees. Thus, in the absence of enlarged, mandatory pension plans, it is doubtful that the retirement income system would be sufficiently expanded in coverage and scale to come close to meeting the adequacy standard established earlier. Indeed, the result could well be a continuation of the present situation, under which employees in the public sector and those working for most larger and some medium-sized firms in the private sector would be covered by pension plans yielding benefits of varying size, while most other employees would continue to be uncovered by any type of pension plan. In other words, while Option 1 would make existing pension plans fairer, it would not ensure any increase in the total amount of benefits payable, nor would it have an effect in extending pension plan coverage to many employees in the system who are now denied such protection. Option 3 would overcome these major shortcomings.

Moreover, in view of the deficiencies of the Option 1 approach, and the need to ensure extended coverage, some would argue that Option 3 is attractive because it provides this extension through the private sector. Not only does this help to ensure that benefits are costed and paid for appropriately, but also that the associated pension funds are allocated through the financial markets.

Mandatory plans of a standard kind would be easier for people to understand than the present system. They would also be cheaper to administer; there would be a lesser role for consultants on questions of plan design and a reduced need for employers and employees to spend time negotiating detailed pension provisions in collective agreements.

D. Case Against Option 3

One argument frequently made against extension of mandatory plans is that the present public system - the Old Age Security (OAS)/Guaranteed Income Supplement (GIS) and the C/QPP - already provides full, or more than full, maintenance of pre-retirement living standards for those who have low incomes in the pre-retirement period. Given this fact, it is contended that the establishment of larger earnings-related mandatory plans would 'over-cover' this group. As noted earlier in this chapter, the treatment of low-income earners is discussed separately later in this report. Here it need only be noted that an enlarged mandatory system would not necessarily have to cover people in this income group. Moreover, if it did cover them, this would reduce their entitlement to income-tested benefits.

Other arguments against mandatory plans are likely to come from two different directions. On the one hand, some critics will be very worried that mandatory plans entail an inappropriate degree of government intervention and compulsion. On the other hand, others will say mandatory plans of a standard type should not be provided by the employer-sponsored pension system - that this is the role of public plans. The latter group would buttress its case by pointing out that while it would likely take many years before mandatory private plans would have a significant impact on retirement incomes, public plans could be phased in more quickly.

A final argument is that mandatory standard plans would require a highly detailed federal-provincial consensus - a consensus that would be very difficult to achieve. Without such a consensus, however, some jurisdictions might require standard plans while others might not. Moreover, standard plans might vary among the provinces and between the federal government and provinces. In that event, a large administrative burden would be thrust on employers with plans in several jurisdictions. The situation could become unworkable.

E. Costs

Table VIII-2 provides an estimate of the costs of the three standard plans, assuming those plans were designed to yield benefits which would, in conjunction with C/QPP benefits, provide 45% replacement of pre-retirement earnings. Vesting is full and immediate; deferred pensions are indexed; and the pensionable age is 65.

The results indicate that the employer and employee cost of these plans is equal to around 5% of the earnings covered by the plan, plus C/QPP contributions (slightly less in respect of the defined benefit plans). Employers and employees each pay roughly one-half the amount. If the cost were expressed as a percentage of total payroll, rather than covered payroll, it would, of course, be somewhat lower.

The costs to individual employers would vary somewhat from those shown in Table VIII-2 owing to differences in the composition of their labour force, investment experience and so on. These factors would not normally alter long-term average employer costs by more than one percentage point of payroll.

Table VIII-2

Costs of Standard Mandatory Plans Shown in Table VIII-1

	Type A	Type B	Type C
Type of plan	defined benefit	defined contribution	half defined benefit half defined contribution
Amount of contributions by:			
Employee	fixed at 4% of covered earnings minus C/QPP contri- butions(1)	fixed at 4% of covered earnings minus C/QPP contributions (1)	fixed at 4% of covered earnings minus C/QPP contributions; employee pays for the defined contribution portion(1)
Employer	actuarially determined, about 2.4% over and above C/QPP contributions	matching contribution equivalent to about 2.5% over and above C/QPP contributions	actuarially determined, about 2.5% over and above C/QPP contri- butions; employer pays for defined benefit portion

(1) For an employee earning at the level of AWS the resulting contribution would be 2.4% of earnings when the Year's Maximum Pensionable Earnings (YMPE) has reached AWS, if the C/QPP contribution rate at that time is at its current level of 1.8% for employees. For the entire employee group the average contribution rate would be 2.5%.

The financing arrangements shown in Table VIII-2 include an employee contribution of 4%, less employee contributions to the C/QPP. (This formula would be amended when C/QPP contribution rates are increased.) Employers whose current pension costs were greater than those cited in the table would not necessarily have to incur still higher costs in order to meet any of the Option 3 features their plans do not now contain. It would be open to such employers to reduce some of the benefits which were above levels required under the standard plans in order to free funds required to meet other provisions. For example, an employer might lower the basic benefit in his plan from 2% toward the minimum 1% basic benefit stipulated under the standard defined benefit plan in order to offset the cost of indexing benefits, as required under this option. Appendix 4 provides more details on costs.

Employers not now offering plans would obviously experience significant cost increases, as would their employees. Those affected most would be small employers and those who work for them.

Small employers frequently operate businesses that are labour intensive, and they generally have only limited ability to pass cost increases on to customers. Accordingly, they would seek to pass added cost backwards to their employees by paying lower wages than otherwise. Whether or not they succeeded, Option 3 would likely attract substantial criticism from small employers.

F. Implementation/Phase-In

As with the other options, a federal-provincial consensus would be a prerequisite to the implementation of this option.

If a decision were made to proceed with mandatory employer-sponsored pension plans, a period of several years of planning prior to implementation might be required if experience in other countries is any indication. Arrangements would undoubtedly have to be made for the establishment of multi-employer plans for many employers, including a high proportion of small employers. An equitable way would also have to be found to share the costs of multi-employer plans in cases where there is a much greater risk of some employers going out of business than of others and where employers in the same plan had employees with different age/mobility characteristics.

Some employee groups might wish to have mandatory plans cover their past service. However, because of the cost involved, many employers who do not now have pension plans would likely experience great difficulty in crediting their employees for past service (if only because their failure to have a pension plan in the past often reflected their inability or unwillingness to sustain the costs involved). This might necessitate an arrangement of the type that appears to be envisaged in the introduction of the proposed mandatory Swiss plan. Under that proposal, full past service credits are to be phased in over ten years for those receiving the minimum pensionable earnings covered by the plan and over 20 years for those at the maximum, with a sliding scale for those in between. Those who reached retirement age before the phase-in was completed would have their past service credits prorated.

Without a phase-in arrangement of this type, full pensions would not be available to those who were not members of employer-sponsored plans, until at least 40 years after the Option 3 legislation had been passed and implemented.

The standard mandatory plans described would cover earnings below 1.5 times AWS. Those with higher earnings could have voluntary, supplementary plans to replace their earnings above the ceiling. This would be similar to the new British system, which came into operation in April 1978, and those planned in Switzerland and the Netherlands. The development of these supplementary plans would be relatively simple once a decision was made on the provisions to be included in the mandatory system. The process would be identical to that now followed for employer-sponsored pension plans which are integrated with the C/QPP and provide benefits on earnings above the maximum covered by the public schemes. If these supplementary plans were to be regulated along the lines contemplated by Option 1, similar transitional provisions could be required.

G. Summary Evaluation of Option 3

This option would produce significantly more replacement income than the present system and eliminate important inequities. It would also ensure a large private sector role. However, it would raise costs for certain groups of employers/employees and extend government compulsion.

Turning once again to the evaluation criteria, the effect of this option is judged as follows:

1. Replacement Income. The result here would likely be good, perhaps even very good. The likelihood that the system would achieve the results for which it was designed would be considerable although, as is now the case, the uncertainty of investment returns means that those in defined contribution parts of the system would have no guarantee about the level of their retirement income and the extent to which it would replace pre-retirement earnings. Results would be less certain than if enlarged public plans were the chosen vehicle.
2. Fairness. This option would narrow dramatically current differences between those who are members of pension plans and those who are not. By definition, all those with earnings would be in the system. Inappropriate differences in treatment occasioned by design features found in the current system would be largely eliminated. However, some concerns of the type described under Option 2 would remain. In particular, changes in the financial markets could alter the market value of pre-retirement accumulations in defined contribution plans from one year to the next. On the whole, however, this option must be rated as good.
3. Economic Effect. Some employers would encounter higher costs (at least in a first round sense). The effect on labour force participation rates should not be significant. There might initially be an increase in saving; over the longer term, the future capital stock is not likely to be significantly different. The market would continue to allocate funds. The overall effect is considered to be passable to good.
4. Personal Choice. The rating here is barely passable.
5. Dignity/Respect. If there were price indexing, as outlined in the following chapter, this option would be graded very good. Pensioners would tend to have adequate retirement incomes protected against inflation without any form of stigma. (In the absence of formal price indexing, the rating is good.)
6. Understandability. The system scores passable.
7. Administrative Ease. On this item, the rating is good, provided that industry-wide or region-wide plans are promoted to accommodate small employers. (If that were not the case, the outcome from an administrative point of view could be very poor.) There would still be many plans but, because they would be standardized to a significant degree, there would likely be somewhat greater efficiency from the viewpoint of actuarial valuations, regulation, and plan design. However, Option 3 would not be as efficient from the viewpoint of administration as an enlarged public plan.

CHAPTER IX

GOVERNMENT MEASURES TO FACILITATE THE MAINTENANCE OF REAL PENSION VALUES

A. Introduction

Each of the policy options discussed to this point contained a proposal that the real value of pension payments and of deferred pensions be substantially maintained in the face of inflation. Since this result is most unlikely to be achieved without some form of legislation, this chapter examines six alternative legislative approaches which governments could consider. These approaches should be considered as complementary to Options 1, 2 and 3.

Before proceeding, it is worth recalling briefly the considerations set out in earlier chapters which led to this proposal.⁽¹⁾ It was noted in these chapters that to the extent that the real value of benefits are not maintained automatically, those with employer-sponsored pensions can experience a good deal of uncertainty and anxiety over their ability to maintain their living standards in the future. To the extent that real values are not maintained fully, pension benefits will be eroded by inflation, which usually implies a transfer of real wealth from pensioners to others.

At present, only a few employer-sponsored pension plans provide close to complete and automatic adjustment for inflation. In the case of defined benefit plans in the private sector, the extent of adjustment for inflation varies widely. As explained in Chapter III, the value of accrued benefits of active employees in many of the larger plans keeps pace with or exceeds the rate of inflation because those benefits are based on final or best average earnings or, alternatively, they are based on flat benefits which are frequently adjusted to take account of rising prices. However, adjustment for inflation of accruing benefits is much less likely to occur in the case of smaller plans. The latter are more likely to provide pensions based on average earnings over the career of an individual and often do not ensure that accrued benefits keep up with rising prices. While partial inflation adjustments to pensions-in-pay on an ad hoc basis are also quite common in larger plans, they are much less common in smaller ones. Terminated employees with deferred pensions are generally treated with the least consideration; only a handful of plans adjust the value of their accrued pensions for inflation between termination and retirement.

(1) See Chapters III and IV.

Although some believe that the need of the elderly for money income declines as they grow older, there is little hard evidence on this issue one way or the other. Moreover, even if this conclusion could be substantiated, it would not constitute a valid argument against the indexing of pensions. On the contrary, it would suggest that pension plans should be explicitly designed to provide the elderly with declining real incomes, rather than allowing the real value of their benefits to be determined by the vagaries of inflation.

Although pensioners are not the only people in our society who are damaged by inflation, elderly people receiving unindexed pensions are particularly vulnerable to its effects. They generally do not have jobs and, since they are seldom able to re-enter the labour market, they normally can do little to offset the decline in the purchasing power of their pensions caused by inflation.

Therefore, it was concluded earlier that it is quite unsatisfactory for the real value of pensions to be determined by anything as arbitrary and unpredictable as the rate of inflation. Action is required to safeguard the purchasing power of the elderly.

However, before considering the alternative courses that could be followed, it is important to restate the ways in which employers can be affected by an indexing requirement.

B. The Financial Impact on Employers of Indexing Pensions

During and immediately following periods of higher than expected rates of inflation, the costs to an employer (as a percentage of payroll) of providing a defined benefit pension plan may fall below the level he had previously anticipated if the value of accrued pensions and/or pension payments is not adjusted for such inflation. In the situation specified, this can occur because the nominal earnings of the pension fund generally increase to at least some degree to reflect the higher than expected rate of inflation, whereas the value of pension accruals and payments do not.⁽²⁾ The fact that employer costs of unindexed pension plans can actually decline during and after a period of higher than expected rates

(2) An important qualification must be made with respect to the effect of inflation on employer costs. During the onset of a period of higher than expected inflation, the employer may not enjoy such inflationary earnings initially if his pension fund portfolio is valued on a market basis, since the market value of his old, lower yielding fixed income securities will decline as new, higher yielding securities become available. As his old securities mature, of course, an increasing proportion of the portfolio will contain higher yielding securities and inflationary earnings will then become available. If the fixed-income securities are accounted for on a book value basis (or on some other basis that masks the full extent of the drop in market values), the accounts of the pension fund may reflect the results of the inflationary earnings much more rapidly. These comments have less application to funds with large equity portfolios, since the impact of inflation on the stock market is a good deal less certain than its impact on the bond market.

of inflation - at the very time when those without indexed pensions are experiencing a loss of purchasing power - is partly responsible for suggestions from some quarters that provincial and federal legislation should require all employer-sponsored pension plans to adjust their pension payments to changes in the cost of living.

Imposition of such an indexing requirement on plans which previously did not provide for such adjustment could create two different types of problems for employers.

Firstly, if there were an unanticipated upsurge in the rate of inflation following an extensive period during which prices had been reasonably stable, an employer could find himself faced with an increase in pension costs over previously anticipated levels. This would not likely be the outcome if the inflation-adjusted rate of return on investment anticipated by the employer were maintained fully in the face of rising prices. But lags are likely to occur, with the result that most employers would be confronted with higher than expected costs.

To the extent that an indexing requirement adds an additional, identifiable cost to a previously unindexed pension plan, it could be paid for by higher employee pension contributions and/or some reduction in other forms of compensation. Alternatively, basic pension benefits could themselves be reduced. In the final analysis, the way in which such costs should be met is probably best determined through the bargaining process between employers and employees. Accordingly, the added cost associated with indexing is not in itself sufficient reason to reject the idea of a legislative requirement that employers maintain the real value of pensions-in-pay.

Nevertheless, there is reason to doubt the fairness to employers of such a requirement. This doubt relates to the additional uncertainty with respect to costs that would arise as a result of indexing pension plans - which is the second major problem that indexing could create for employers.(3) When all the benefit provisions of a defined benefit plan are indexed, pension liabilities are governed heavily by the rate of inflation - a factor over which the individual employer has no control. On the other hand, the value of pension assets will not necessarily increase to the same extent. In particular, the market value of existing fixed-income securities in the pension fund portfolio that have a fairly long term to maturity will almost certainly decline during a period of greater than expected inflation.

If all the benefit features of a plan are unindexed (including accruals), if the average term to maturity of the securities in the pension portfolio is relatively short, and if the method of asset valuation does not reflect the full extent of market changes, there will normally be little or no deficiency in pension fund liabilities during a period of greater than expected inflation. In that situation, inflationary earnings will be available to the employer as a result of the increase in nominal investment returns. But in plans in which pension accruals

(3)See Chapter IV.

are automatically indexed, such as those based on final or best average earnings, employers are more likely to encounter rising costs due to the combination of rising liabilities for active plan members and the possibility of a smaller than expected increase in the value of plan assets. For employers such sudden unanticipated pension cost increases are a worry, even though the cost increases may turn out in fact to be only short-term in nature.

Furthermore, few employers are likely to be confident that short-term cost increases, due to lower than expected inflation-adjusted investment returns, will necessarily be balanced by higher returns in a subsequent period; and even if this turned out to be true for the economy generally, individual employers could not be sure that the performance of their own pension fund portfolio would parallel any economy-wide average. Therefore, in addition to the volatility in short-term costs, employers are also confronted by uncertainty with respect to their longer-term costs.

By not fully indexing all benefit provisions for inflation, a cushion is provided to the employer against the risk of increases in long-term costs beyond estimated levels. When pension payments are not indexed, they can still be increased by the employer on an ad hoc basis when he judges he is able to afford the increase. When an unindexed plan is indexed, however, that discretionary cushion is removed and the employer becomes exposed irrevocably to the risk of long-term increases in his pension plan costs.

Risks of higher than expected pension costs, whether of a short- or longer-term nature, can be borne more easily by some employers than by others. Employers in labour intensive industries and in those industries which are highly competitive could find price indexing a tough proposition - one which they feel compelled to resist. On the other hand, indexing would pose a less serious problem for employers in the following situations:

- those whose labour and pension costs represent only a small portion of total costs;
- those who are large long-term borrowers and who would consequently benefit if rates of inflation turned out to be higher than reflected in the interest rate at which they borrowed (with these gains thus offsetting to one degree or other the losses that these same inflationary events cause their pension funds); and
- those with large financial resources, particularly if they are in a position to pass on higher pension costs to their customers through higher prices.

In summary, it is principally because of cost uncertainty that it is not appropriate for the law simply to require all employers to index their pension payments to a price index. To the contrary, if such legislation were passed, it should be accompanied by some means of reducing the very real risks to employers that arise out of such uncertainty.

C. Alternative Policy Proposals

In evaluating ways of facilitating the maintenance of real pension values, a key consideration is the extent to which there is room for confidence that, over the long term, the inflation-adjusted rate of return on financial assets will remain relatively constant. Other important factors to be taken into account in considering individual proposals include: the extent to which the burden of uncertain investment returns should be shared between pensioners, plan members, employers, and government; and the administrative cost and complexity of the alternatives.

The first two of the policy alternatives discussed below involve adjustment of pension values by some proxy for a price index. Under this general approach, investment return - in one way or another - determines the amount by which pension payments are adjusted. Such an approach shifts some of the burden of cost uncertainty associated with indexing from employers to current and future pensioners. The next three alternatives discussed involve the full and automatic indexing of pension values to a price index. In these cases, the difficulty that full and automatic indexing poses for many employers is alleviated by shifting a portion, or all, of the uncertainty of short- and long-term costs from employers to others, principally governments.

1. Alternative 1: Indexing Pensions to Reflect 'Inflationary Earnings' of Individual Pension Fund Portfolios. This alternative would require that pension payments - and in limited circumstances, perhaps, the accrued pension benefits of active workers and the deferred pensions of terminated workers - be updated regularly by what is sometimes referred to as the inflationary earnings or the 'excess earnings' of pension funds. A proposal along these lines is included in the Rapport du Comité d'étude sur le financement du Régime de rentes du Québec et sur les régimes supplémentaires de rentes (COFIRENTES+), but without full details on methods for implementation (see Appendix 3). A bill relating to federal public service pensions, which was based in part on a similar principle, was introduced during the 1978-1979 session of Parliament but was not adopted before dissolution.

Under Alternative 1, annual calculations would be made of the inflationary earnings of individual pension funds - that is, the earnings resulting from a higher nominal return on investment than that originally assumed for purposes of determining plan costs. The inflationary earnings attributable, or deemed to be attributable, to the assets held on behalf of pensioners would be allocated to the pensioners. If the amount were greater than that required to adjust for a specified price index, the excess not required in that year would be set aside and used to assist pensioners during years when inflationary earnings were less than the amount needed to keep up with the price index. In addition, in plans where accrued benefits for active workers were not automatically updated, the inflationary earnings on assets held on their behalf could also be used to improve their benefits. In that particular case, the deferred pensions of terminated employees should be improved similarly, as outlined under Option 1. Some plans already adjust pensions-in-pay based on the amount of inflationary earnings available.

If Alternative 1 were chosen, it would be necessary to place some restriction on the choice of the interest rate to be used for defining inflationary earnings. Some actuaries now use high rates of return (7-8%) when valuing plans. If pension values were to be updated by the inflationary earnings only, this type of discretion would be inappropriate because the higher the rate of return assumed by the employer, the smaller the adjustment in benefits for the pensioner.

Accordingly, this first approach would likely require legislation specifying either a particular rate of return, or at least a maximum rate of return, that could reasonably be expected to prevail in a non-inflationary setting. Earnings in excess of that specified amount would be considered inflationary earnings. If a single rate were specified, it might be 3 or 3.5%. Pension funds typically invest in a mixed portfolio of bonds, stocks and mortgages. An inflation-adjusted rate of return in the range of 3-3.5% is consistent with the long-term historical returns on such a mix of assets.(4)

There are several ways in which this approach could be implemented. The following is one. If 3.5% were adopted as the base, and if realized investment returns for a given fund during a specific year were 6.5%, pension payments would be adjusted upward by 3% in respect of that year provided that the increase in the price index for the year were not less than 3%. If the increase in the price index were only 2%, then the investment earnings not required for indexing would be set aside (or 'banked') for use in respect of a year when the inflationary earnings were insufficient to adjust pensions in accordance with the increase in the price index. If, however, in some subsequent year the realized investment returns for this fund were less than the base rate of 3.5%, the 'bank' would first be used to bring the fund to the position it would have been in had it earned the 3.5% return. Any amount then remaining would be used to provide an increase in pension payments. If there were insufficient money in the bank to bring the investment return of the fund up to the 3.5% base level, that shortfall would be made good before pension increases were resumed.

Following the principles set out above, Column 1 of Table IX-1 indicates what the experience would have been in each year from 1962-1978 for pensioners who had been members of a hypothetical mature pension plan which introduced this method of adjustment in 1963 using its inflationary

(4)See Appendix 10.

earnings from 1962. The plan is assumed to obtain an annual return on its fund equal to the median rate of return earned by private pension funds in Canada in each of those 17 years.(5) In calculating the effect of this alternative, it was also assumed that all earnings in the hypothetical plan that were above 4% annually were inflationary earnings. (It was not uncommon in 1962 for actuaries to use 4% as the valuation interest rate for plans.)

In practice, of course, had such a policy been in effect since 1962, individual pensioners would have experienced different fluctuations, both larger and smaller, in the real value of their pension payments than those shown in Table IX-1. This is mainly because individual plans would have had a different investment experience than the median fund. Nonetheless, the table gives some indication of the result of such a policy if 4% had been selected at that time as the maximum rate which would prevail in a non-inflationary setting. It suggests that indexing to inflationary earnings of one's own pension fund would not provide nearly as much security against inflation as price indexing. But it would be much superior to the unindexed pension shown in Column 3.

Table IX-1

The Real Value (in Constant 1962 Dollars)
of a \$1.00 Pension Commencing in 1962

	Indexed to the Annual Rate of Change in the CPI up to the Limit of Inflationary Earnings of the Median Pension Fund	Indexed to the Consumer Price Index	Unindexed
	(1)	(2)	(3)
1962	1.00	1.00	1.00
1963	1.00	1.00	.98
1964	1.00	1.00	.97
1965	1.00	1.00	.95
1966	1.00	1.00	.91
1967	1.00	1.00	.88
1968	.97	1.00	.84
1969	.96	1.00	.81
1970	.98	1.00	.78
1971	.95	1.00	.76
1972	.92	1.00	.72
1973	.93	1.00	.67
1974	1.00	1.00	.61
1975	.90	1.00	.55
1976	.81	1.00	.51
1977	.76	1.00	.47
1978	.72	1.00	.43

(5)Based on statistics on pension fund performance provided by Wood Gundy Limited, Toronto. For details on method of calculation, see Appendix 20.

Table IX-2, appearing in the discussion of Alternative 2 below, is also relevant for Alternative 1. It shows the results of indexing to the inflationary earnings of each of three different classes of fixed-income securities in which pension funds frequently invest. (In each case, in doing the calculations, an amount was subtracted from the nominal investment returns to reflect what might have been accepted in 1962 as the underlying rate of return, after adjustment for inflation, for those classes of securities. A different amount might well be subtracted if such a procedure were to be introduced now.) The data in Table IX-2 show, as would be expected, that the shorter the term to maturity of the securities, the more constant the returns earned on them on an inflation-adjusted basis. Thus, indexing a pension to the inflationary earnings on 90-day finance company paper would have resulted in virtually complete protection against inflation. Indexing to the inflationary earnings of conventional mortgages (with an assumed average term to maturity of three years) would have provided good protection, but not as good as the 90-day finance company paper. Indexing to the ten industrial bonds in the McLeod Young Weir index, which have an average term to maturity of around 20 years, and experienced greater volatility in investment return, would have resulted in substantially less protection. Although not shown in Table IX-2, returns on stocks are, in general, even more volatile than returns on fixed-income securities with the result that the degree of protection from inflation can vary widely. The point that emerges here is that, if an inflationary earnings scheme had been introduced in 1962, pension fund managers could have invested the assets held in respect of their pensioners in classes of securities that would have adjusted to a substantial degree for inflation. Alternative 1 would then have provided pensioners a significant degree of protection against inflation.

There is a trade-off with such an investment policy. Concentrating investments in securities that have a relatively short term to maturity may be expected, on average, to result in lower inflation-adjusted rates of return than investment in stocks or fixed-income securities with a longer term to maturity. In the case of defined benefit plans a lower inflation-adjusted rate of return would mean that a given flow of pension benefits would require a larger fund to support them; pension contributions would thus have to be increased (or basic benefits reduced). In the case of defined contribution plans, the use of a lower (non-inflationary) rate of return in determining the level of the pensions payable, would mean that the initial amount of pensions whose real values are to be protected would also be lower.

Under an inflationary earnings approach, since the success of portfolio management in maximizing returns differs from one fund to another, pensioners in different plans would receive adjustment payments that varied.⁽⁶⁾ Indeed, under this approach, if the pension fund never produced any inflationary earnings, the pensioners would receive no adjustment in their pensions.

(6) The extent of the variation could be reduced by the establishment of minimum standards that all plans would be required to meet with respect to annual pension adjustments. While such minimum standards would add to the cost uncertainty borne by employers, in this case, much of the burden of uncertain investment returns would still rest on the shoulders of the pensioner.

Nonetheless, this approach would, in general represent an important improvement over the existing system, because many pensioners now do not receive the pension increases which would be warranted by the amount of inflationary returns earned on pension fund assets.

In the many cases where inflationary earnings have not been used to enrich pension benefits, they will have been applied by an employer to reduce his pension costs. Since such an employer could face a significant increase in his currently anticipated costs if this alternative form of inflation compensation were adopted, a case might be made for phasing in its adoption gradually. On the other hand, strong arguments can also be made for rapid improvement of the position of pensioners whose purchasing power had declined in recent years because their benefits have been unindexed. Deciding on the pace of implementation would require an extensive process of consultation with those most affected.

While Alternative 1 might require governments to establish certain rules and regulations, it would not impose a substantial administrative burden on them as regulators. Nor would it create such an administrative burden for employers.

2. Alternative 2: Indexing Pensions to Reflect Inflationary Earnings of a Prescribed Portfolio. Under Alternative 1, pension values are increased by the inflationary earnings of the specific portfolios held by individual pension funds. Alternative 2 would require pension values to be indexed to the rate of return on a prescribed portfolio of securities whether or not individual pension funds in fact hold their assets in a portfolio of similar composition.

Table IX-2 indicates what would have been the real value in 1962 dollars of three pensions of \$1.00 commencing in that year if the pensions were indexed to the annual rate of change in the CPI up to the limit of the inflationary earnings of a pension fund whose assets were invested entirely in 90-day finance company paper in the case of the first pension, conventional mortgages in the second, and industrial bonds in the third.(7) The data in Table IX-2 indicate that had such an approach been in effect since 1962, indexing to the rate of return on a mix of securities with a short to medium term to maturity - as illustrated by the results for finance company paper and conventional mortgages - would have produced an increase in benefits that approximately matched the increase in the Consumer Price Index until the mid-1970s. The same hypothetical pension plan and 'banking approach' which were used in developing Table IX-1 were also used in developing Table IX-2. (If different starting dates had been used, both for Tables IX-1 and IX-2, the results would not have been significantly different.)

(7)For a discussion of rates of return, see Appendix 10.

Table IX-2

The Real Value (in Constant 1962 Dollars) of a \$1.00 Pension Indexed to the Annual Rate of Change in the CPI up to the Limit of Inflationary Earnings of a Pension Fund Invested Wholly in One Class of Security

	90-Day Finance Co. Paper	Conventional Mortgages	10 Industrial Bonds
Non-inflationary rate(1)	<u>2%</u>	<u>4%</u>	<u>2%</u>
1962	1.00	1.00	1.00
1963	1.00	1.00	1.00
1964	1.00	1.00	1.00
1965	1.00	1.00	1.00
1966	1.00	1.00	1.00
1967	1.00	1.00	1.00
1968	1.00	1.00	.97
1969	1.00	.99	.94
1970	1.00	.97	.89
1971	1.00	.98	.87
1972	1.00	1.00	.84
1973	1.00	1.00	.97
1974	1.00	1.00	1.00
1975	.99	.97	.95
1976	.99	.90	.86
1977	.98	.91	.80
1978	.99	.92	.83

(1) In all three cases, the non-inflationary rate chosen was approximately equal to the difference between the compound rate of growth of the nominal rate of return of each type of security and the compound rate of growth in the CPI over the ten years ended in 1961.

Alternative 2 would entail greater risk for employers than Alternative 1 unless the employer invested his pension assets in the type of securities that make up the prescribed portfolio. But it would provide more uniform treatment to pensioners to the degree indicated in Table IX-2, depending on the composition of the prescribed portfolio.

The precise form that a contractual undertaking of this type might take requires further consideration. Legislation might specify that pensions-in-pay had to be adjusted according to a formula that reflects the rate of return on certain classes of securities with

an average term to maturity of, say, three years.(8) Employers then could, if they wished, invest in the classes of securities specified in the formula, thus removing any cost uncertainty from their shoulders.(9) In the event that they had confidence in their own ability to outperform the securities in the formula, they would, of course, be free to invest in other assets.

3. Alternative 3: Indexing to the CPI through a Government-Operated Stabilization Facility. This alternative provides for real pension values to be maintained fully and automatically by employers who, in return for that undertaking, would be eligible to participate in a government-operated facility that would help to stabilize the returns they earn on their pension assets. Under this approach, employers would value their pension plans on the basis of the estimated inflation-adjusted returns available to them and inflationary earnings would be used to finance indexing payments.

The stabilization approach, discussed in greater detail in Appendix 13, seeks to increase the stability and predictability of the short- and medium-term inflation-adjusted rates of investment return available to employers and others operating pension funds and, in so doing, to provide stability and predictability of pension costs. The stabilization facility would do this by transferring credits to pension funds or to others responsible for 'covered assets', such as insurance companies, during years when inflation-adjusted rates of return fell below levels that reflected historical experience.(10) Conversely, it would make claims

- (8)One question that arises is how any significant switch to shorter-term securities might affect basic pension benefits. Traditional economic theory holds that - other things being equal - the shorter the term to maturity of a security, the lower its yield is likely to be; and if pension funds moved their portfolios to such shorter-term instruments, the lower yields on assets would - after a period of adjustment - likely mean lower pension benefits. During the recent past, however, inflation-adjusted rates of return on short- to medium-term securities have been somewhat better than those on long-term securities because of smaller capital losses during periods of accelerating inflation. If the historical time/yield pattern were to reassert itself, there would be the same trade-off noted under Alternative 1, with pensioners receiving, on average, somewhat smaller pensions in real terms, in return for the certainty that real values would be more or less maintained.
- (9)If this practice were followed, to a considerable degree the demand for these classes of securities would increase and the rate of return on them would undoubtedly be affected.
- (10)The scope of this alternative (and that of Alternative 5 - Indexed Bonds) could be wide - applying to most retirement savings that are being accumulated to provide future pension benefits, such as those in Registered Pension Plans (RPPs) or Registered Retirement Savings Plans (RRSPs) - or narrow - applying only to assets held in respect of pensions and annuities-in-pay and deferred annuities. The text here simply refers to covered assets, leaving the scope of application of the alternatives to be discussed at the end of this chapter.

on and receive credits from those entities in years when inflation-adjusted rates of return were higher than the levels available over some earlier period.

The legislation establishing the facility would define: an annual inflation-adjusted rate of return to be employed as a benchmark for a given year; and an average inflation-adjusted rate of return for some longer period, called the 'standard' rate. Appendix 13 suggests that the annual benchmark rate might be the inflation-adjusted return on long-term Canada bonds in the year in question, and that the standard rate might be the average inflation-adjusted rate of return on these same securities over the 15-year period ending in the year in question.(11)

If the benchmark rate for a given year were less than the standard rate, the facility would transfer credits to participating pension funds, and to others with covered assets, and vice versa. In each instance, the magnitude of the payment to, or by, a given institution or individual would be determined by the differential between the benchmark and standard rates, multiplied by the magnitude of the assets involved. Thus, if the differential between the two rates were one percentage point in favour of participants, the facility would disburse credits of \$10,000 to each of them for every \$1 million in covered assets they held.(12) As with Alternatives 1 and 2, this approach retains the incentive for pension funds and others to manage their investments as profitably as possible since anyone who outperforms the standard rate reaps the full reward of his action.

(11) Rates of return on individual securities may be regarded as having three components: a basic return for the use of capital; an inflation-compensation component; and an allowance for risk and liquidity. Rates of return on long-term Canada bonds are likely to be less heavily influenced by changing perceptions of their liquidity, and of the risk attached to them, than most other securities. Thus, the risk and liquidity premiums themselves are likely very small. Annual changes in the returns on long-term Canada bonds are, therefore, most likely to be a function of changes in the basic cost of money and of changes in inflation expectations. Both of these reflect economy-wide factors, rather than factors unique to those particular securities. Annual inflation rates can be approximated by using published Consumer Price data. Accordingly, it is possible to approximate the annual inflation-adjusted rate of return on long-term Canada bonds and to use this rate as a proxy for the basic rate of return on financial assets generally. The annual inflation-adjusted rate is likely to fluctuate considerably, but by using a 15-year moving average for the standard rate, the underlying trend in inflation-adjusted rates of return on long-term Canada bonds (and hence on fixed-income financial assets) is likely to be reflected.

(12) The stabilization approach adjusts the annual returns realized by pension funds by the amount by which the benchmark inflation-adjusted rate of return deviates from the historical norm as implied in the standard rate. For example, if the standard rate for a 15-year period were 2% and the benchmark rate for the last year of that 15-year period were only 1.5%, it is implicitly assumed in the stabilization approach that rates of return on financial assets generally (not just rates on long-term Canada bonds) had fallen short of expectations by the same one-half percentage point margin.

The stabilization approach would assist employers in that their estimate of investment returns five years hence would be affected by the fact that they would know 10 of the 15 numbers that would make up the standard rate at that time. This would contribute to their cost predictability. If a surge of inflation over the next five years raised their pension liabilities, there would also be a tendency for both earnings from investment and receipts from the stabilization facility to rise. As a consequence, the growth in covered assets would come substantially closer to paralleling the actual growth in liabilities than would have been the case in the absence of the stabilization approach.

In operating the facility, the government could incur substantial non-budgetary expenditures, or collect substantial non-budgetary revenues, from one year to the next. In the event of several years of consecutive deficits or surpluses - assuming all trustee pension fund assets were covered - based on simulations that reflect historical experience, cumulative deficits or surpluses could amount to a few billion dollars before they would begin to reverse themselves. If only pensions and annuities-in-pay and deferred pension obligations of trustee pension funds were covered, the potential swings would be perhaps one-quarter to one-third as large. But, unless there were a secular change in the return to financial assets, the effects over long periods ought to be offsetting, with periods of surpluses or deficits cancelling out one another.

If there were a secular deviation in the return to capital, however, a chronic surplus or deficit would occur in the facility. While there is no clear evidence to suggest that such a shift is currently underway, the risk of such an event occurring cannot be entirely ignored. Of course, if such a shift were to occur, and there were no stabilization facility, pension funds and/or pensioners would likely bear the cost or reap the benefit of the shift.

The operation of a stabilization facility need not have a significant impact on government cash balances. Settlement of accounts between the government and pension plans and other participants could, under most circumstances, take the form of an exchange of paper - instruments of indebtedness. Only under very limited circumstances, such as the wind-up of a pension plan, would cash outlays be required.

4. Alternative 4: Real Rate Annuities. In a report prepared for the Economic Council of Canada, James Pesando proposed that the federal government underwrite the inflation risk inherent in fully indexed annuities marketed by life insurance companies.(13) The scope of his scheme could be expanded to include assets held in respect of pension and annuity liabilities by a broader range of institutions, including trustee pension funds.

(13)James E. Pesando, Private Pensions in an Inflationary Climate: Limitations and Policy Alternatives, Economic Council of Canada, 1978.

Pesando's scheme would require that the federal government establish a rate of interest to be used by pension funds and life insurance companies in calculating their obligations to pensioners and annuitants. This rate would be used to calculate initial annuity benefit levels. The established rate of interest would also be used to determine the level of anticipated inflation for the life of the annuity by subtracting the rate from the current yield on long-term Government of Canada bonds of an appropriate maturity. Assuming, for example, that the fixed standard rate of interest were set at 2% per annum, and the current yield on 15-year Canada bonds were 9%, the implied level of anticipated inflation for a 15-year annuity would be 9% minus 2% or 7%. In subsequent years when the rate of inflation was 7%, the issuer of the annuity would pay the (expected) cost of increasing the annuity payments by 7%. In those years when the CPI exceeded 7%, the issuer would increase the annuity payments by the full amount of the increase of the CPI and the government would then reimburse the issuer for that portion of the annuity increase over 7%. If the increase in the CPI were less than 7%, the issuing agency would pay to the federal government the difference between its actual payments as adjusted for the price index and the payment level implied by the expected 7% increase.

Using the above interest and inflation assumptions, and assuming that annuity payments were geared to the yield on long-term Canada bonds, an insurance company could offer prospective annuitants with a 15-year life expectancy an initial annuity of about \$78 per annum per \$1,000 contributed, escalating thereafter with the CPI. Table IX-3 illustrates the operation of this alternative under one set of fluctuating inflation rates. (Although a 15-year annuity is used for illustrative purposes below, the scheme would in practice be applied exclusively or mainly to life annuities.)

Table IX-3

Real Rate Annuities - Operation under Conditions of Varying Inflation

Year of Annuity	Inflation Rate Experienced During Preceding Year	Actual Payout	Anticipated Inflation Rate	Ins. Co. Scheduled Payout	Effect on Federal Government
	%	\$	%	\$	
1	7	77.83	7	77.83	-
2	7	83.28	7	83.28	-
3	7	89.11	7	89.11	-
4	2	90.89	7	95.35	receipt of \$4.46 from insurance co. (i.e. \$95.35-\$90.89)
5	15	104.52	7	102.02	payment of \$2.50 to insurance co.
6	3	107.66	7	109.16	receipt of \$2.50 from insurance co.

In the above example, the initial payout in the first year on a \$1,000, 15-year annuity would be \$77.83. In the second year, the payout would be increased by 7% to \$83.28 to reflect actual inflation in the preceding year of this amount. In the fourth year, the actual payout would increase by only 2% to \$90.89 to reflect the actual inflation rate of the previous year. The insurance company would have scheduled a payout of \$95.35 for the fourth year based on the anticipated 7% inflation rate - determined by the 9% yield on 15-year Canada bonds, less the 2% fixed standard rate prevailing at the time the annuity contract was entered into. The difference between the anticipated and actual payout of \$4.46 would be transferred to the federal government. In year five, the process would be reversed because the actual inflation rate of the preceding year and the consequent payout exceeded the scheduled payout based on the anticipated inflation rate.

The real rate annuity scheme has some things in common with the stabilization approach: it works through existing institutions; and it seeks to be self-financing by siphoning off 'surpluses' in fat years and dispensing the proceeds in lean years.

Under this scheme, the risk to government would appear to be greater, and the risk to employers less, than it would be under a stabilization facility. The risk to the government increases because the scheme, as outlined by Pesando, uses a fixed rate. If the fixed rate proved too low, the government would likely come under pressure to raise the figure. If it proved too high, however, there would be less pressure to amend the legislated rate. In contrast, the stabilization approach is based on a standard rate which adjusts to changing circumstances.

5. Alternative 5: Indexed Bonds. Indexed bonds differ from traditional 'money bonds' in the way interest is calculated.(14) The coupon rate on a traditional bond is normally fixed for the life of the bond and reflects in part market expectations about future rates of inflation. Indexed bonds, on the other hand, carry a lower interest coupon than a money bond and inflation is compensated for in a 'separate transaction.

With money bonds, the eventual distribution of the cost impact of inflation between borrower and lender depends on the actual inflationary experience during the life of the bond as compared to inflationary expectations at the time the bond was issued. With indexed bonds, the lender is guaranteed a fixed inflation-adjusted rate of return without regard to the inflationary expectations at the time of issue or the actual inflationary experience during the life of the bond. The issuer of the bond, on the other hand, knows in advance that his actual borrowing costs will fully reflect the inflationary experience during the life of the bond.

If pension funds were able to acquire indexed bonds that promised inflation-adjusted rates equal to those they now expect, opposition to a fully indexed employer-sponsored pension system would probably be eliminated. In that case, all employers who wished to do so would have at their disposal the means to eliminate the risk implicit in their indexed pension liabilities. While this would not necessarily mean that all employer-sponsored pension funds would hold only indexed bonds, it would mean that risk-conscious and financially less secure employers would be able to look upon the indexing of pensions with equanimity, because they could transfer to others the risks associated with a fully indexed pension plan.

Under Alternative 5, the feasibility of introducing a system of indexed pensions is linked to the availability of an adequate supply of indexed bonds. If all pension fund assets were to be 'covered', the supply of indexed federal and provincial bonds would likely be too small to satisfy demand. The basis for this conclusion is set out in Appendix 12. Indeed, even assuming that well under 100% of pension fund assets were covered, if the federal government alone were always to issue a sufficient volume of indexed bonds to meet pension fund demands, this would sooner or later result in a situation where the level of federal borrowing was no longer mainly a function of its own cash requirements, but rather of the requirements of pension funds for indexed federal securities.

(14)Appendix 12 describes the mechanics of indexed bonds, makes rough estimates of the amounts that might be demanded and supplied, and seeks to determine the effect of the introduction of indexed bonds on the economic and financial infrastructure.

The analysis in Appendix 12 finds some favourable and some unfavourable effects associated with the issuance of indexed bonds. The main conclusion of the analysis is simply that the net effect is highly uncertain. This uncertainty, together with the undistinguished record of indexed securities in other countries, gives cause for great caution.

With regard to the distribution of risk in a system using indexed bonds, employers would face an uncertain liability only to the extent that they chose not to invest solely in indexed bonds (in the hope of improving their overall real rate of return). On the other hand, governments, as the issuers of indexed bonds, would be totally at risk.

6. Alternative 6: Extending Amortization Periods. Existing pension benefits standards legislation provides for the amortization of pension funds' unfunded liabilities over periods generally ranging from 3 to 15 years (except in the case of initial unfunded liabilities), depending on the cause and nature of the deficiency. In principle, it would be possible to provide still longer amortization periods for deficiencies as a means of smoothing out employer pension costs in an inflationary environment. In practice, it would prove very difficult to differentiate between inflation-related deficiencies and those attributable to other causes.(15)

An important question that arises is whether an extended amortization period alone would be adequate to alleviate the impact of full indexing on employer pension costs to any significant degree. It would probably not be so viewed by many employers. In particular, it would do nothing to reduce the uncertainty with respect to the overall, longer-term cost of a given pension package.

Another weakness of this approach lies in the present arrangements whereby employers are not required to make good any deficiencies in cases of plan termination (where plans are not mandatory) - deficiencies that might be greater than otherwise with extended amortization provisions. To safeguard the acquired pension benefits of pensioners and pension plan members, extended amortization provisions would likely necessitate a publicly-operated pension plan insurance facility to guarantee the payment of such benefits. The risk associated with such a scheme would be difficult to assess. Employer premiums, if they were genuinely

(15)The present system provides employers with considerable latitude with respect to the way in which they handle experience gains. Such gains can be used in a number of ways, including the reduction of current employer contributions. To reduce employer pension cost volatility by means of more liberal amortization provisions for inflation-related deficiencies would likely also require a legal proviso to ensure that any gains were set aside to be used to offset previous or subsequent deficiencies. Since it appears difficult, if not impossible, to differentiate between inflation-related and other deficiencies, such a legal proviso might need to be extended to all experience gains.

related to risk, would have to be most onerous for those who could least afford them. The alternative, the use of a common premium rate regardless of risk, would not appeal to those employers who would otherwise have been in a 'low-risk' category. There is probably also insufficient experience to determine appropriate insurance rates; at least this appears to have been the case with a reinsurance scheme operated in the United States.

While more liberal amortization provisions presumably could play some role as one component of a package designed to facilitate the indexing of pensions, they do not provide the total answer. Employers would likely look upon an extended amortization initiative as an effort by the government to force them to assume indexed pension obligations without the government having to assume any portion of the risk inherent in such a significant change in pension arrangements.

D. Comparison of Alternatives

Because Alternative 6 does not appear capable by itself of providing the basis for preserving real pension values, only five alternatives remain to be considered. The following table compares these alternatives on the basis of: (A) evenhandedness (i.e. the extent to which they would apply equally to all pensioners); (B) effectiveness (i.e. their ability to maintain real values); (C) simplicity of administration; and (D) risk distribution between employees, employers and governments.

Table IX-4

Comparison of Five Alternative Approaches
for Preserving Real Pension Values

Alternatives	Indexing to Inflationary Earnings		Price Indexing with		
	Individual Pension Portfolio	Prescribed Portfolio	Stabi- lization Facility	Real Rate Annuity	Indexed Bonds
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
(A) Evenhandedness	pass- able	very good	very good	very good	very good
(B) Effectiveness	pass- able	pass- able	very good	very good	very good
(C) Simplicity of administration					
- for government	very good	very good	good	pass- able	good
- for employers (or pension administrators)	pass- able	pass- able	good	pass- able	good
(D) Exposure to risk					
- for government	none	none	mod- erate	high	high
- for employers	fairly low	mod- erate	mod- erate	none	low
- for employees/pensioners	fairly high	mod- erate	very low	none	none

Under all of the alternatives listed, except Alternative 1, there is evenhanded treatment of pensioners. All groups of pensioners are treated similarly. The treatment of groups of pensioners under Alternative 1, however, would vary according to the investment performance of the pension fund with which they are associated.

Since full indexing is assumed under Alternatives 3, 4 and 5, each of these scores 'very good' on the rating scale for effectiveness. Alternatives 1 and 2 are graded passable because adjustments would not necessarily protect pensioners fully.

Administratively, the first two alternatives would pose no significant problems for the government and would be unlikely to pose major difficulties for most employers. Both Alternatives 3 and 4 would require administrative resources. The latter would require the government both to deal with a large number of intermediaries and to keep track of numerous transactions by each intermediary. For the same reason, pension fund administrators, and those to whom they delegated the pension payment function - such as insurance companies - would find that the real rate annuity approach involved additional record keeping.

From the perspective of risk exposure, the government would bear none at all in either of the 'inflationary earnings' schemes. In both cases, employers and employees/pensioners would share the risk, but in the first scheme somewhat more of the risk would be shouldered by employees/pensioners. Of the remaining alternatives, the government would be least vulnerable with a stabilization scheme, and rather more so with indexed bonds and real rate annuities.

E. Scope of Government Intervention

A fundamental question remains relating to the scope of pension assets to be covered by any of the above five alternatives. The following list suggests the assets that might be covered in descending order of priority: pensions-in-pay; deferred pensions for terminated employees; life annuities purchased by the elderly on the maturing of RRSPs; other life annuities purchased by the elderly; accrued pension benefits; RRSPs during the accrual period; and all other private savings for retirement income purposes accumulated prior to retirement.

The reasons for protecting the real value of pensions-in-pay and deferred annuities for terminated employees have already been dealt with at length. As also indicated earlier, these same reasons can be advanced for extending similar protection to those who, because of the nature of their employment during their working career, had no opportunity to belong to an employer-sponsored pension program. Such individuals often provide for their old age through an RRSP. Others, for example small businessmen and farmers, depend upon the equity in their business venture as the key to a comfortable old age. The extension of any inflation protection feature contemplated to all life annuities during the payout period would place these elderly individuals on an equal footing with former pension plan members. Otherwise, former pension plan members would be in a favoured position during their retirement because the purchasing power of their pensions would be protected, while the retirement income of those in other circumstances would not.

Deciding on whether any legislated measure should apply to the last three types of retirement saving in the list above is difficult in the absence of knowledge as to which, if any, of Options 1, 2 or 3 is to serve as the basis for government policy. For instance, if governments were to implement Option 3, they might judge it necessary to guarantee some minimum inflation-adjusted rate of return on all pension assets, including the assets in respect of accruing pensions. But governments might be more attracted to one of the inflationary earnings schemes if Option 1 or 2 were the basis for policy.

In the event that governments do choose to make available a facility to assist in the preservation of real pension values, that assistance should be available only up to some ceiling for each pensioner. This would limit the amount of government risk, and would also ensure that no group would benefit unduly from the willingness of governments to bear risk. Government assistance might be available, for instance, to cover pensions-in-pay and annuities-in-pay up to a maximum of, say, the level of the average wage in the economy, which in 1979 is around \$15,000. (If pension accruals were also covered, the maximum accrual covered would presumably be the amount that would purchase that \$15,000 pension or annuity at age 65.)

F. Conclusion

Of the five alternatives, the indexed bond alternative is not suggested. Its impact on the economy and on financial markets is uncertain and, for that reason, a source of concern.

If Option 3 (Mandatory Employer-Sponsored Plans) were the basis for policy, it might be necessary to take steps to facilitate the maintenance of real pension values during the period of pension accrual, as well as during the period of pension deferment and payout. In this regard, it will be recalled that Option 3 requires that deferred pensions be updated on the basis of a wage and salary index, and it calls for pensions-in-pay to be maintained fully or substantially. The required government assistance could be provided through a stabilization facility or real rate annuity scheme. In the first case, the risk of greater than expected cost is spread between the government and employer; in the second, the government alone bears this risk. Combining Option 3 with a real rate annuity scheme is in important respects similar to Option 4, which is discussed in the next chapter. In both cases, government absorbs all risks of greater than expected costs.

If Option 1 or 2 were to be the basis of government policy, and if governments were ready to assist in the preservation of real pension values, it is assumed that such assistance would apply only to pensions and annuities-in-pay, up to the specified ceiling, and possibly to deferred pensions, but not to accruals. The reason is that neither Option 1 nor Option 2 involves legislation requiring employers to maintain automatically real pension values during the accrual period. Once again, the choice of vehicle here depends on whose shoulders the government considers it most appropriate to place the burden of uncertain and volatile costs associated with indexing.

Under Options 1 or 2, if governments were not prepared to assist directly, by making a facility available, one of the inflationary earnings schemes would be appropriate. Under the first such scheme, with respect to pensions and annuities-in-pay, uncertainty is borne by pensioners and annuitants; under the second, it is shared by employers and pensioners/annuitants.(16)

(16)While not essential, in defined benefit plans in which accrued benefits for active workers are not automatically updated, the inflationary earnings on the assets held on their behalf could be used to improve their benefits. Note that this has not been proposed as a design feature of Option 1 (see Chapter VI) but could nonetheless be the basis for periodic revaluations of accrued benefits by employers on a voluntary basis. If this were done voluntarily, Option 1 would require that the deferred pensions of terminated employees be improved similarly.

CHAPTER X

OPTION 4: LARGER PUBLIC PLANS

A. Introduction

The fourth and last option to be considered as a means of dealing with the multiplicity of problems surrounding the present employer-sponsored pension system is to replace a substantial portion of it with expanded benefits under the Canada/Quebec Pension Plans (C/QPP). A variation of this option, numbered as Option 4A, would allow employers to 'contract out' of the enlarged public plan if they provided at least equivalent benefits under their own private plans. If the objective of such an enlargement of the C/QPP were to ensure that most of the elderly maintain pre-retirement living standards after retirement, this would entail an increase in the replacement income provided by the C/QPP from the present level of 25% of average adjusted lifetime earnings to between 40-45%, and an increase in the ceiling on maximum pensionable earnings covered by those plans from the average level of wages and salaries - the present statutory target - to 1.5 times that level. (For illustrative purposes only, a 45% C/QPP is referred to in the report.)(1) This option includes a two-thirds survivor's pension after the death of the husband or wife.

One objection often registered against enlarging the C/QPP is that it would affect adversely the level of saving in the economy and would reduce the amount of capital available to the private sector, retarding future economic growth. The validity of this argument was considered in Chapter IV. It was indicated there that both the empirical and theoretical bases for this objection are at least open to serious question. It is necessary only to observe here that to the extent there are grounds for concern about the saving and investment consequences of larger public plans, such concerns might well be allayed if such plans were partially funded and some portion of the funds generated were allocated through the capital markets. Mechanisms whereby the pension contributions could be channelled through the capital markets are discussed in Chapter XIII and Appendix 17. Therefore, subject to one qualification mentioned immediately below, the pros and cons of enlarged public plans are examined here on their own merits and the saving and investment arguments are set aside until Chapter XIII. The qualification is that, even if the monies collected to finance expanded public plans were to flow directly to the capital markets, there could remain some public concern that governments would influence the allocation of these funds.

(1) Increasing Old Age Security (OAS) benefits would also, of course, constitute an enlargement of public plans. But here, as in the rest of the report, it is assumed that OAS benefits are maintained at their 1977 level relative to average wages and salaries (AWS).

B. Case for Option 4

Beyond the rationale for mandatory arrangements that was set out earlier, the case for larger public plans is straightforward. They would displace much of the employer-sponsored system, which some people view as being incapable of operating fairly and efficiently. An enlarged C/QPP would unquestionably be easier and cheaper to administer than a myriad of employer plans. Since portability would be built in, and vesting would, in effect, be full and immediate, two major shortcomings of the present system would automatically be avoided. Expanded pension benefits would also be available to those who now do not have the opportunity to become members of employer-sponsored plans and to qualify for the supplementary retirement income they provide. On the assumption that the enlarged public plans would disburse indexed benefits, inflation would not arbitrarily shift resources away from pensioners to others. The present gap between the treatment of public and private sector pensioners would also be reduced significantly since all pensioners would receive a higher proportion of their retirement income from the same public plans.

Therefore, a powerful case can be made for expanding the C/QPP. It is worth repeating, however, that a federal-provincial consensus is required, and that to offset any potentially harmful economic effects, appropriate financing and investment policies would have to be formulated.

C. Case Against Option 4

If the larger plans embraced all those with earned income, some people would be covered - and would be required to pay for the additional coverage - who might prefer to be exempt. The size of this group would obviously depend on the replacement figure chosen. The higher contributions and benefits an enlarged C/QPP would entail would result in some people with low earnings in their work years having higher disposable incomes in retirement than before. As noted in the discussion of Option 3, this issue is discussed later in the report.

Secondly, the C/QPP provide less choice to both employers and employees than is possible under the employer-sponsored system.

Thirdly, whatever the intrinsic merits of enlarged public plans, a consensus may exist among Canadians against expansion of the role of government in this area. Certainly those who hold this view would argue that it would be better to work at improving the employer-sponsored pension system, whatever its limitations, rather than to displace it in considerable measure by an expanded public pension system.

D. Option 4A 'Mandatory Public-Private Plans'

Enlarging the C/QPP would result in a much reduced role for most employer-sponsored pension plans and an expanded government role in the sense that more resources would flow through the government sector.

Option 3 would obviously not have this impact but, as seen earlier, it might present small employers who are unable to join industry-wide or region-wide plans with substantial administrative and funding problems.(2)

In order to mitigate the concerns that might emerge with either an Option 3 or 4 approach, consideration should be given to an alternative approach that would combine elements of both. Here, employers would be permitted to contract out of the enlarged portion of the C/QPP if they undertook to establish plans which would generate comparable benefits. In the case of those employers who chose not to contract out, the employers and their employees would be required to contribute to the expanded C/QPP. Such a combined approach was introduced in Britain in 1978.

Employers who contracted out would be required to fund fully the liabilities of their plan and, in the event of bankruptcy or plan termination, they would be required to transfer the assets to the public scheme so as to protect the accumulated pension benefits of former employees.

If Option 4A were selected, however, it would be necessary in designing the terms and conditions of the expanded C/QPP to take careful account of the needs and capacities of the private system. The contribution rates for those working for employers who chose to remain within the expanded C/QPP would have to be set at a level similar to those required to finance the benefits provided by employers that did contract out. In addition, the period over which the higher C/QPP benefits would be phased in would have to be sufficiently long for private plans to be able to fund a corresponding increase in the level of benefits they provided.

Once started, a plan based on the contracting-out approach would also have to be kept relatively stable. Furthermore, it would be impractical to introduce new benefits or to increase existing ones on short notice, because the contracted-out employers would not be in a position to finance them without a reasonable phasing-in period. When benefits were enriched, appropriate contribution rate increases would be required for both the C/QPP and the contracted-out plans.

Since employers who contracted out would have to provide pensions which maintained their real value, one of the supportive government measures considered in Chapter IX would have to be introduced as part of the total system.

(2) Difficulties of this type have hampered the implementation of the proposed mandatory private plan systems in both the Netherlands and Switzerland.

A few comments on the British contracting-out scheme may be appropriate. Aside from conditional benefits for the needy (analogous to the Guaranteed Income Supplement (GIS) in Canada), the British system now has three main components: a basic flat rate pension in the range of 20-25% of national average earnings for a single person who has met the contribution requirements and which are related to labour force participation; (3) a compulsory, earnings-related component covering the range of earnings between 20-25% and about 140-175% of national average earnings; and voluntary supplementary private employer plans.

A British employer may contract out of the second tier, i.e. the compulsory earnings-related scheme, if the private pension plan he offers his employees meets certain requirements. As of September 1, 1978, some 13,500 private plans covering some nine million employees had, in fact, contracted out. (4) In general, it has been the large employers - those who prior to the introduction of the new scheme accounted for the vast majority of employees covered by private pension plans - who have done so. Employers who contract out must provide the compulsory, earnings-related benefits above the flat rate base, but the indexing of those pensions is paid for by the government. Also, employers have to revalue deferred pensions on the basis of a formula, up to a maximum of 5% per annum, with the government paying any excess over the 5% maximum if the rate of inflation exceeds that amount.

The maximum retirement pension under the new British scheme will be available after a phase-in period of 20 years. This compares with the ten-year phase-in period that was incorporated in the provisions of the C/QPP following their introduction in 1966. (5)

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- (3) This rate is increased by 60% for a married couple where the wife is over 60 years of age.
- (4) This represented the plans of 20,000 employers - the difference between the number of plans and the number of employers reflecting the incidence of multi-employer plans.
- (5) The full British National Insurance contribution rate of 6.5% of covered earnings by employees and 10% by employers is abated for contracted-out plans by 2.5 percentage points and 4.5 percentage points respectively. The balance of 9.5% of covered earnings (16.5% minus 7%) collected by the government goes toward the cost of the basic flat rate pension plan, the revaluation (indexing) of deferred pensions in excess of 5% per annum, indexing of the mandatory pensions-in-pay of both public and private plans, sickness and maternity benefits, unemployment insurance, workers compensation and about one-sixth of the cost of health insurance. The contributions for all these benefits paid by the state scheme are determined on an overall, pay-as-you-go basis. The 7% rate of abatement represents the government actuary's initial estimate of the value of the guaranteed maximum pension benefits under the average contracted-out plan. As the state scheme matures and economic circumstances change, the rate of abatement will be regularly reviewed.

When a member of a contracted-out plan terminates employment after completing five years' service, his employer has a choice between providing the member with a deferred annuity, transferring the member's credit to a new employer's plan (presuming that he has also contracted out), or transferring the credit to the state scheme. The employer has only two choices in the case of employees who terminate with less than five years of service - transferring the credits to the state scheme or providing a deferred annuity. Once the employer has adopted a procedure with respect to those with more than five years' service, and those with less, he must continue to follow it consistently. An essential feature of the contracting-out system is that employers who contract out make investment gains or suffer losses depending on their portfolio management.

In the event that Canadians favour an enlarged mandatory system, and have difficulty choosing between Options 3 and 4, Option 4A deserves careful consideration.

E. Costs

Estimated costs of enlarging the C/QPP, replacing 45% of average adjusted pre-retirement earnings up to 1.5 times AWS, are shown in Table X-1 together with corresponding estimates in respect of the current C/QPP.(6)

Table X-1 shows the estimated full cost contribution rate for the enlarged C/QPP to be 12.4% of earnings subject to contribution when the inflation-adjusted rate of return is 3.5%.(7) This compares with an estimated full cost contribution rate of 7.0% for the present C/QPP. If

(6) No provision for increased benefits for death, disability, or orphans is made in respect of the additional 20 replacement points of the C/QPP. The Year's Basic Exemption (YBE) - that is, the minimum below which earnings are not subject to contributions - is at present equivalent to approximately 10% of the Year's Maximum Pensionable Earnings (YMPE) that are subject to contribution. The current objective is to restore the maximum to the level of AWS. If an enlarged plan were added to the present system, it is assumed for purposes of calculation that once the YMPE had become equal to the average wage and salary level, the YBE would be fixed at 10% of AWS. At the point when the YMPE had been raised to 1.5 times the average wage and salary level, the basic exemption would remain at 10% of the wage and salary average, but would amount to only 6.7% of maximum pensionable earnings.

(7) Full cost rates are those which are estimated to be sufficient to cover the total cost of providing benefits in the future for each age group as it enters the labour force. This cost would be met by contributions from both employers and employees. The uncertainty surrounding the incidence of costs as between the two groups was discussed in the analysis of the effect of the pension system on employers in Chapter IV.

the inflation-adjusted rate of return were assumed to drop to 2%, the estimated full cost rate of the enlarged plans would rise to 18.6% compared to 10.6% for the present C/QPP.

The 3.5% rate of return implies investment in a mixed portfolio and is the rate used generally in this report in respect of private sector plans. If C/QPP funds were to be invested in market instruments, it would not be unreasonable to assume the higher investment return and the lower contribution schedule.

Table X-1

Estimated Contribution Rates on Earnings
Subject to Contribution Under Option 4

	Current C/QPP	Larger C/QPP
	(%)	
Current rate	3.6	n.a.
Full cost rate assuming inflation- adjusted rate of return equals:(1)		
3 1/2%	7.0	12.4
2%	10.6	18.6
Pay-as-you-go rate by the year:		
2001	6.2	10.8
2031	11.0	20.2

(1) More precisely, the assumptions for the full cost rates are a rate of inflation of 3%, a rate of wage and salary growth of 5% and rates of investment return of 6 1/2% in the first case and 5% in the second.

The full cost rates quoted above would, in the long run, be little influenced by changes in the proportion of elderly in the population. On a pay-as-you-go basis, however, using the low fertility/low immigration demographic assumptions described in Appendix 9, C/QPP costs as a percentage of earnings subject to contribution in 2001 would be 6.2% for the present C/QPP and 10.8% for the larger plans. In 2031, these costs would be 11 and 20.2% respectively.

It should be noted that the costs cited in the foregoing paragraphs make no provision for enlarged benefits in respect of past service.

F. Implementation/Phase-In

If federal-provincial agreement were secured, Option 4 could be implemented rapidly once the required legislation had been passed by Parliament and the Quebec National Assembly. The administrative problems to be dealt with would be analogous to those experienced when the Canada

Pension Plan and Quebec Pension Plan were introduced in 1966. At that time, about 12 months were allowed for making the necessary arrangements for collecting contributions, modifying contribution rates to employer-sponsored pension plans and establishing needed administrative organizations. With the experience gained then, and considering that administrative machinery is already in place, the required time to implement any significant changes in the C/QPP should be less.

A more important question relates to the period during which the enlarged benefits might be phased in, and whether they should be available to those already retired at the time the new legislation is implemented. It will be recalled that when the C/QPP were introduced, a period of some ten years was adopted for the phasing in of entitlement to full benefits.

The shorter the period of time during which benefits are phased in, the larger the advantage to those in their later working years. Conversely, the longer the transition period, the smaller the advantage to that group. The same point can also be made about those who have already retired. Provision of any of the enlarged benefits to that group would constitute a 'windfall'.

Decisions relating to the length of the transition period, and the size of benefits to be made available to the current elderly and to those who have made less than a full career's contributions, are intimately linked to the issue of intergenerational equity discussed in Chapter IV. In that chapter it was suggested that, as a matter of equity, any cohort of workers should provide to the elderly the same treatment it wishes to receive when it retires. In this connection, the earlier evaluation suggested that the public pensions which the current members of the labour force have planned for themselves when they retire would provide them with relatively greater benefits than those now being received by the current elderly. If an enlarged mandatory pension system is brought into effect, this gap between the expected treatment of the future elderly and the actual treatment of today's elderly would grow. Therefore, it is arguable that a relatively rapid phase-in of the enlarged benefits would be called for and that special consideration should be given to those already retired.

However, because of the earnings-related character of the C/QPP, it is also the case that the quicker the phase-in, the greater the benefit to those with higher earnings. Accordingly, taking account of the desirability of intragenerational equity, as well as the need for fairness between generations, a phase-in period of 10-15 years might be appropriate for those whose earnings were at or above the new ceiling on pensionable earnings. A shorter period could, however, be justified for those at the lower end of the covered earnings range on the grounds

that they would receive none of the advantages from the increase in maximum pensionable earnings that would accrue to those with higher earned income. It could also be justified on general distributional grounds.(8)

The effect of an expansion of the C/QPP on employer-sponsored plans could lead to a repetition of the events which followed the introduction of these public plans. Some plans - mostly those which were small - would be terminated as a combined result of higher C/QPP contribution rates and benefit levels. Most medium-sized and large plans would remain, but would likely reduce substantially their contributions and benefits in respect of earnings below the new ceiling on maximum pensionable earnings.

The remaining scope for voluntary employer-sponsored plans would thus be focused on three main areas. One would be with respect to earnings above the ceiling on pensionable earnings under the C/QPP. A second would be in situations where people wished replacement income in excess of that provided by a 45% C/QPP formula. A third would relate to the provision of benefits not available under the public plans, such as access to pension benefits prior to age 65.

G. Summary Evaluation of Option 4

If it is considered that the goal of public policy should be to ensure that the elderly are able to maintain reasonable continuity of their living standards in retirement, it is likely that objective can only be achieved by expanding the pension system on a mandatory basis. Such expansion could take place either through private or public plans. The public approach is simpler administratively and can be phased in more rapidly. The ratings for the public approach in relation to the evaluation criteria adopted previously are outlined below.

1. Replacement Income. The option is rated very good on this criterion. The system produces the amount of replacement income that is desired.
2. Fairness. This option eliminates differences in treatment of people within plans and between plans. If it were implemented, the total retirement income system would remain substantially redistributive. Inflation would no longer arbitrarily shift resources away from pensioners. Accordingly, Option 4 is graded very good.

(8) It might, for example, be practicable to adopt a transitional system along the following lines: for those not yet retired whose average adjusted lifetime earnings were less than half the average level of wages and salaries, the benefit would be raised immediately from 25 to 45% of earnings; for those whose average lifetime earnings amounted to between 50-75% of AWS, the increase from the 25% benefit to the 45% benefit would be phased in over five years; for those with earnings ranging from that level up to the AWS, there would be a phase-in period of ten years; for those with earnings above the average wage and salary level, the phase-in period would be 15 years. This type of approach would not be applicable under Option 4A.

3. Economic Effect. Assuming market allocation of funds, this option is rated passable to good. Costs to employers and employees would increase.
4. Personal Choice. The rating is poor. Little room is left for individual discretion.
5. Dignity/Respect. The rating here is very good.
6. Understandability. With a single plan, the system would be simpler and more understandable than a range of mandatory employer arrangements. Nevertheless, the C/QPP are themselves somewhat complex. The rating is, thus, only passable.
7. Administrative Ease. With a single plan, the rating is very good.

CHAPTER XI

COMPARISON OF THE OPTIONS

It will be recalled that Chapter V outlined a number of goals for the reform of Canada's retirement income system. One was to increase significantly the amount of retirement income that is paid without resort to an income or means test. Another was to narrow inappropriate and inequitable differences in pension benefits available to people in essentially similar economic circumstances. A third reform related to the desirability of improving equity between generations, and a fourth was concerned with the need to eliminate poverty among the elderly.

The four policy options discussed up to this point, together with the alternative methods for preserving the real value of pension benefits, have been put forward as possible means of meeting one or both of the first two reform goals, though they bear also on the goal of intergenerational equity. Before comparing the options to the present retirement income system and to one another, it may be useful to recall briefly the main features of each of them.

- Option 1: Strengthening Current Arrangements in the Employer-Sponsored Pension System through legislation that would, among other things, provide for: much earlier 'locked-in' vesting; updating of the deferred pensions of terminated employees; substantial preservation of the real value of pensions and annuities-in-pay; splitting of pension credits on marriage breakdown; and compulsory post-retirement survivorship provisions. Coverage could be facilitated through provisions for a Registered Employee Pension Fund (REPF).
- Option 2: Replacement of Defined Benefit Pension Plans by Defined Contribution Plans, which would entail the compulsory phasing out of defined benefit plans. Where defined contribution plans were adopted, locked-in vesting would be full and immediate, the real value of pensions and annuities-in-pay would be substantially maintained, pension credits would be split on marriage breakdown, and post-retirement survivorship provisions would be required.
- Option 3: Mandatory Employer-Sponsored Pension Plans, requiring all employers, either individually or in groups, to offer one of the following:
- a) a standard defined benefit plan; or
 - b) a standard defined contribution plan; or
 - c) plans combining a) and b).

In each case, plans under Option 3 would have to meet certain specifications which would be similar to, but in some cases more stringent than, the conditions that would attach to Options 1 and 2, where employers were not required to offer pension schemes.

Option 4: Larger Earnings-Related Public Pension Plans, which would replace much of the employer-sponsored system by providing benefits on a scale comparable to those in Option 3. A sub-option (4A) envisages the possibility of permitting employers who agree to provide comparable benefits to 'contract out' of the enlarged Canada/Quebec Pension Plans (C/QPP).

Government could take an initiative to facilitate the maintenance of real pension values under any one of the first three options and under Option 4A. (Under Option 4 these would continue to be maintained as at present.) Such an initiative could include the provision of either a stabilization facility or a real rate annuity scheme for employers who agreed to preserve the real value of pensions, assuming the government, or governments, were prepared to underwrite at least part of the risk of uncertain investment returns. In the event that governments were unwilling to assume any of the risks of indexing associated with employer-sponsored pension plans, legislation could be enacted to require that pensions and annuities be indexed to rates of return on securities averaging about three years to maturity or to the 'inflationary earnings' of individual pension funds.

This chapter provides a comparative evaluation of these options. Table XI-1 summarizes the evaluation of the options contained in Chapters VI, VII, VIII and X, together with the evaluation of various aspects of the present system. Note that Option 4A is not analysed separately because it is little different from Option 4 in its effect on retirement incomes. If Option 4 were preferred, Option 4A should be considered seriously.

Two results of the following comparison of the four options and of the present system deserve mention. The first is that current arrangements score poorly on almost all counts. This is a function of unevenness of pension coverage, late vesting, little portability, inadequate adjustment for inflation, and several other design problems. These factors affect adversely the ratings for replacement income, fairness and dignity/respect.

The second point is that the higher ratings are generally to be found among the mandatory plan alternatives on the right hand side of the table. The reasons for this should be noted.

The mandatory arrangements fare better in terms of replacement income. The non-mandatory options, including current arrangements, leave a substantial proportion of workers uncovered and where there is coverage, there is no minimum benefit level. These considerations would weigh heavily with those who consider it important that the system ensure income replacement levels for middle-income earners so that their living standards after retirement are roughly equal to those achieved

before retirement. Indeed, they would weigh heavily with all those who believe that the vast majority of workers would prefer such arrangements when they are fully aware of the costs and benefits.

With respect to fairness, the mandatory options are generally rated somewhat better than those which are non-mandatory. With mandatory arrangements, much of the current criticism relating to differences in circumstances between those who have adequate pension arrangements and those who have not - a large part of which has focused on the position of those in public service plans - would be reduced.

The differences in the economic impact of the various options may not be great. Many factors affect labour input and saving levels, of which pension arrangements are but one. The evidence is not strong that pension arrangements are a major factor - although it must be acknowledged that the evidence is by no means definitive. In any event, the option that scores the highest from the economic perspective is Option 2, where the presumption is strongest that there will be no significantly adverse implications for savings and the disturbance for private employers will be the least. It bears repeating that Option 4, enlarged public plans, is based on the premise that a significant proportion of the funds would be allocated through the capital market. Were this not a part of the option, it would receive a lower rating.

None of the options, mandatory or non-mandatory, scores high on the personal choice criterion. For those who consider it appropriate to eliminate compulsory plan membership, Options 1 and 2 could be redesigned so that employers would not have the right to require plan membership of their employees. Options 3 and 4 could also provide more room for individual discretion. In some cases, however, such as allowing earlier access to reduced pension benefits, the provision of more room for individual discretion would reduce the amount of replacement income the options are designed to provide.

Table XI-1
Synoptic Analysis of Policy Options Using Evaluation Criteria

Criterion	Current Arrangements	Non-Mandatory Options
Replacement income	Poor. A majority of current elderly report little or no private pension, annuity or investment income. Over one-half of current elderly have levels of replacement income that makes them eligible for GIS. Maturity of the C/QPP will bring improvements but, for many, living standards in retirement will remain substantially below pre-retirement levels.	¹ Barely passable. With better treatment of mobile employees, and of spouses and former spouses of plan members, replacement income may be distributed somewhat more evenly. But coverage is not mandatory and there is no minimum employer-sponsored benefit level. Therefore it is still likely many will undergo sharp reductions in living standards after retirement.
Fairness	Poor. Mobility patterns, earnings paths, length of uninterrupted service, etc. in conjunction with plan design, lead to arbitrary differences in pensions. Protection from inflationary impacts varies widely between employees.	Passable. Current differences in treatment of people due to program design and poor portability reduced. If governments act to preserve the real value of both pensions and annuities-in-pay against inflation, differences between those in plans and those out of plans would be narrowed.
Economic effect	Passable to good. Labour supply may be somewhat reduced in 'first round' sense. Investment policies may result in more government borrowing and larger stock of public capital than otherwise.	Passable to good. Labour mobility not affected adversely and incentives for withdrawal from labour force reduced.
Personal choice	Barely passable. Little personal choice allowed participants.	Barely passable. Even with REPF plan, little discretion generally allowed pension plan participants.
Dignity of, and respect for, elderly	Poor. Outcomes in real terms uncertain in private plans.	Passable.
Level of understanding	Poor. Diversity in types of employer plans and conditions within them inhibits understanding (especially relevant to mobile employees).	Barely passable. Many types of plans remain, but with some standardization.
Administrative ease	Barely passable. Many types of plans.	Barely passable. Many types of plans.

Rating system	Poor	Barely passable	Passable	Good	Very good
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Table XI-1
Synoptic Analysis of Policy Options Using Evaluation Criteria

Non-Mandatory Options		Mandatory Options	
<u>2</u>	<u>3</u>	<u>4</u>	
Barely passable, because of full and immediate vesting, and better treatment of spouses and former spouses of plan members	Good to very good. But uncertainty of investment return would remain for defined contribution plans.	Very good. Meets desired criterion.	
Good. Differences due to design problems eliminated; all employees treated equally. But levels of pension income depend heavily on financial markets at time of retirement since the amount of annuity will be affected by the value of the accumulated funds.	Good. Current inequities dramatically reduced, but outcomes of defined contribution plans depend on financial markets at the time of retirement.	Very good. No unwarranted differences in treatment of people within plans or between plans (after completion of phase-in).	
Very good. Artificial barriers to labour mobility and incentive for early withdrawal from labour force eliminated. Cost uncertainty for employers eliminated.	Passable to good. Increasing costs for some employers. Allocation of saving and investment through market.	Passable to good providing there is market allocation of funds. Increasing costs for some employers.	
Barely passable. Employers can still require employee participation.	Barely passable.	Poor.	
Passable.	Good to very good.	Very good.	
Good. One type of plan for all. Easier in some respects to understand than defined benefit plan.	Passable. Few types of plans.	Passable. Simpler and more understandable than a range of employer arrangements, but the plan design itself is complex.	
Good. Plans simple and easy to administer.	Good, if industry- or region-wide plans created for small employers; if not may be poor. Although many plans, standardization would reduce costs.	Very good. Simple standardized arrangements. Contributions integrated with tax collection process.	

There are significant differences in administrative costs associated with the current system and the four options. The current system is 'barely passable' here. Option 3 is good due to the economies that standardization would entail. A single public plan would be cheapest and easiest to administer.

The Preferred Options

The most important consideration in choosing among the options is whether the scope of mandatory pension arrangements should be extended. On the basis of the evaluation criteria adopted - criteria derived from the objectives underlying current legislation - a strong case exists for the expansion of mandatory arrangements, as is evident from Table XI-1.

A different conclusion may be reached, however, by those who consider that the existing objectives of the retirement income system should be re-ordered so that relatively greater weight is given to individual choice (and, by implication, less weight is attached to the elimination of poverty among the elderly and the preservation of pre-retirement living standards). Some scope for individual choice and initiative is reflected already in the tax incentives provided for those saving in Registered Retirement Savings Plans (RRSPs). However, the law does not prohibit employers from requiring pension plan membership as a condition of employment, and the law does 'lock in' vested pension credits and accumulations after certain age and service conditions have been reached. Both of these factors suggest that individual choice has not been a predominant objective of public policy up to the present time. Those who wish to give personal choice more weight in the future would tend to oppose any extension of mandatory arrangements. They would not wish to extend to others in the labour force the type of compulsion that now applies to the more than 3.5 million Canadians in employer-sponsored pension plans who at present have no choice with regard to participation. It would be consistent with this perspective to move towards the 'savings-type' approach inherent in Option 2, to eliminate the existing right of employers to make pension plans compulsory for their employees, and to do away with all statutory lock-in provisions.

A further reason why some might object to an extension of mandatory arrangements is that this would lead to larger government involvement in the economy. But since the mandatory options have, in fact, been designed to provide for the market allocation of pension funds, to a substantial degree this concern should be alleviated.

For those who favour an extension of mandatory arrangements, the choice among the mandatory options - Options 3, 4 and 4A - is likely to turn principally on two main considerations: the certainly of the benefits, and the control of investment of pension assets. Administrative factors represent a further consideration to be taken into account.

With respect to the certainty of benefits, Option 3 is less attractive than Options 4 or 4A for two reasons. The first is that the former does not require all employers to provide defined benefit pension plans - the type of plan which offers the greatest degree of certainty to employees and pensioners. The short life span of many of thousands of small- and medium-sized businesses together with the administrative requirements and uncertainty of costs associated with defined benefit plans, all lie behind the provision in Option 3 that would permit them to offer defined contribution plans. However, defined contribution plans do not guarantee a firm relationship between pre-retirement earnings and the level of pension benefits. The second reason why Option 3 provides less certainty with respect to benefits than either of the latter two options stems from the fact that it would allow employers to provide a locked-in double refund to employees terminating with less than five years' employment, rather than a deferred pension. In many cases, these refunds would be 'rolled over' into an RRSP or the proposed REPF. As with defined contribution plans, RRSPs and REPFs are heavily dependent on rates of investment return and do not guarantee a firm relationship between the level of pension income and pre-retirement earnings. Options 4 and 4A would guarantee such a relationship.

In choosing among the mandatory options, the question of who is to control the pension assets is also very important. Under Option 3 investment of the pension assets through financial markets would be assured. Option 4 has also been designed to achieve market allocation of funds but, in the light of historical evidence relating to the CPP, this could prove difficult to arrange. In the past, governments agreed that CPP funds should be loaned to the provinces, and the provinces might insist that these arrangements apply also in respect of assets associated with an enlarged system. Even if all governments involved decided that CPP funds should be channelled through financial markets, a concern could remain that those making investment decisions would be unduly influenced by political factors unrelated to the interests of contributors and pensioners. For the QPP, decisions with respect to the allocation of investments from the enlarged plan would presumably remain a matter for the Quebec authorities alone.

The 'contracting-out' option, Option 4A, would be between Options 3 and 4 in terms of ensuring the market allocation of pension funds. In summary, on the matter of market allocation of funds, there does not appear to be a large difference between options, but Option 3 is the preferred one from this point of view.

As indicated previously, administrative considerations argue in favour of an enlarged C/QPP as the better alternative.

A full discussion of the costs of all the options is set out in Chapter XII. In general, based on the economic assumptions specified there and adopted throughout the report, it appears that the aggregate amount currently being paid specifically for retirement income purposes - some on a pay-as-you-go basis and some on a funded basis (both through public and private arrangements) - is equivalent to around 12% of all wages and salaries and earnings from self-employment in the economy. If

full cost rates were to be charged for the C/QPP - rates that reflected the estimated cost of the future benefits currently being promised -this proportion would rise to between 13-14% of total labour income.

If Option 3 or 4 were implemented, in conjunction with an Old Age Security/Guaranteed Income Supplement (OAS/GIS) benefits that keep up with average wages and salaries (AWS), it is estimated that the aggregate costs of these programs alone - excluding discretionary retirement saving and voluntary pension plans supplementing the mandatory schemes - would be equivalent to about 13% of all earnings. This calculation is based on contribution and tax rates that reflect the full costs of the specified benefits. Assuming that some people would wish retirement income in excess of that provided by the enlarged mandatory component, the funds required to be devoted to retirement income purposes would probably be equivalent to some 15% of total earnings. This increase from between 13-14% to 15% is not as great as might have been expected, since much of current outlay for employer-sponsored plans and for personal saving through RRSPs would be subsumed in the enlarged mandatory arrangement. However, many small employers and their employees would bear a much higher than proportional share of additional costs, since in many cases they have no pension plan in effect at present or only a very modest one.

It is difficult to characterize the overall costs of Options 1 and 2 since it is unclear what the average response of employers would be to the new requirements. If some employers dropped their plans and others reduced their benefit formulae to free up funds to pay for the new requirements, it is certainly possible that the end result would be no change in the 12% of earnings estimate noted above (or the 13-14% estimate which is based on full cost contribution rates for the existing C/QPP). The higher the coverage and benefits of the employer-sponsored pension system that would emerge from Options 1 and 2, the higher would be the aggregate cost of all retirement income arrangements.

In summary, the comparison of options suggests that a strong case exists for extending mandatory arrangements so long as the funds associated with those arrangements are channelled in a way that does not affect resource allocation adversely. As between Options 3 and 4, there are advantages from an administrative perspective, and to a lesser extent from a certainty of replacement income perspective, in Option 4.

If Option 4 is selected, the possibility of contracting out should be considered (Option 4A). However, if there is a desire to act through private institutions, or a doubt that it would be possible to arrange for CPP investments to be channelled through the market effectively, Option 3 may be the more attractive.

The institution of mandatory employer-sponsored plans would constitute a new approach to pension arrangements in Canada. Accordingly, there would undoubtedly be a need for extensive public discussion before such an approach were adopted. Assuming that such discussion produced a consensus that an Option 3 approach were workable, it still might be desirable for a portion of the enlarged retirement income system to be

provided through the C/QPP. If it were decided, for example, that the maximum level of pensionable earnings covered by the mandatory system should be raised from the average level of wages and salaries to 1.5 times that level, it would be most simple from an administrative point of view to extend the present 25% C/QPP benefit to cover earnings up to that amount. The mandatory employer-sponsored plans would then be responsible for enriching the benefit level from 25% to around 45% of adjusted lifetime earnings up to 1.5 times AWS.

The comparison of pension benefit levels in different countries outlined in Chapter III shows that those promised by Canada's mandatory pension plans tend toward the lower end of the scale for people who had been middle-income earners in their work years. This is true both in respect of the percentage of replacement income generated and the level of pre-retirement earnings covered. Mandatory arrangements of the size outlined in Options 3 and 4 more closely parallel the level of pension benefits found elsewhere.

It is conceivable that even some of those who would prefer eventual adoption of the mandatory approach might judge that immediate implementation of one or the other option is impractical. The following are steps which this group might consider desirable as interim measures so as to strengthen the existing employer-sponsored pension system:

- all persons with vested benefits who leave a pension plan before retirement to be treated in a similar manner to those who stay, i.e. any updating of benefits for active members must apply to those with deferred pensions;
- pension benefits to be vested, and locked in, early, perhaps no later than at 30 years of age and after 2 years of service;
- pensions-in-pay to be adjusted on the basis of an index that reflects the inflationary earnings of a prescribed portfolio with a relatively short term to maturity, or on the basis of the inflationary earnings of the pension plan in question;
- voluntary retirement prior to the normal retirement age within a plan to be possible only on the basis of an actuarially reduced pension;
- provisions for survivor's benefits to be included in all plans; and
- pension credits or accumulations to be divided between spouses on marriage breakdown.

These steps are based on Option 1. Adopting them would facilitate an eventual move to a larger mandatory earnings-related pension system, particularly one based on employer-sponsored plans.

CHAPTER XII

COSTING THE POLICY OPTIONS

The report to this point has outlined four broad approaches to the reform of the earnings-related pension system. The chapters dealing with those options included some estimate of their respective costs. This chapter gathers together and elaborates on those cost data.(1)

Costs are discussed below from two perspectives. The first is the cost impact that each of the four options would have on employers and employees. In the context of this first perspective, particular attention is directed to the cost implications for low-income earners of adopting an enlarged, mandatory, earning-related pension system. The second perspective is the impact on the finances of governments. The chapter then touches on some of the considerations which must be taken into account in forming a judgment on the extent to which those costs can be afforded by employees, employers, governments and the economy as a whole. A brief summary of the main points is set out at the end.

A. Effect on Employees and Employers

1. Total Costs of the Current System. In 1976, about \$13 billion - an amount equivalent to 11.8% of total earnings generated by the economy - was paid by employers, employees and taxpayers to meet the cost of the major retirement income programs that are listed in Table XII-1.(2) (In addition, a further amount of 1.2% of total earnings was paid by employers in respect of initial unfunded liabilities and experience deficiencies of their pension plans.)

(1) Data included in this chapter and elsewhere in the report on the financial flows and fund sizes of the Canada and Quebec Pension Plans (C/QPP), together with some estimates relating to other elements of the retirement income system, have been derived using the Department of Insurance's CPP model. Long-run projections of Gross National Expenditure (GNE) made by the Department of Finance have been incorporated in the analysis. Adjustments have been made to take account of differences in assumptions between the CPP model and the GNE projections with respect to long-term labour force participation rates.

(2) Where used in this report, total earnings include wages, salaries, military pay and earnings from self-employment. Supplementary labour income is not included.

Table XII-1

Estimated Amount of Contributions and Taxes Directed to
Major Retirement Income Programs as a Percentage of Total Earnings, 1976(1)

	% of Total Earnings
Public programs	
C/QPP(2)	2.0
OAS	2.9
Income-tested programs (GIS and provincial)	1.2
Sub-total	6.1
Private programs	
RPPs	3.8
RRSPs(3)	1.9
Sub-total	5.7
Total	11.8

- (1)As noted in the text, Table XII-1 does not include the 1.2% of earnings paid by employers for the amortization of initial unfunded liabilities and experience deficiencies in their plans.
- (2)To bring together costs of the various elements of the retirement income system, the familiar C/QPP contribution rates used elsewhere in the report must be re-based. Since the Year's Basic Exemption (YBE) and the Year's Maximum Pensionable Earnings (YMPE) normally have no counterpart in the financing base of other elements of the system, for purposes of integrating cost estimates, C/QPP contributions at an aggregate level have been expressed as a percentage of total earnings. Thus, the 3.6% of earnings subject to C/QPP contributions in 1976 were equivalent to 2.0% of total earnings in that year.
- (3)Some part of the Registered Retirement Savings Plan (RRSP) contributions shown was almost certainly not motivated primarily by retirement objectives. But some other forms of personal saving not included in the table - such as endowment policies - are almost certainly intended for retirement. These two factors at least operate in opposite directions, and are assumed to offset each other for purposes of this analysis.

The Old Age Security (OAS) and income-tested programs are financed on a pay-as-you-go basis and the figures shown are based on that method of financing. The figure for the C/QPP reflects the fact that these programs are only partially funded, while the figure for Registered Pension Plans (RPPs) is based on something fairly close to full funding. As a result, the estimated total cost of contributions and taxes directed toward these programs of 11.8% of earnings is something of a hybrid.

If the contribution rate for the C/QPP shown in the table were increased to the level that is estimated to be required to cover the full cost of benefits being earned under the programs by new entrants to the labour force (the full cost rate), the total cost of those contributions

as a percentage of total earnings would have been 3.9% - almost double the 2.0% figure shown.(3) Lines 1 and 2 in Table XII-2 illustrate this impact. They show that if full cost rates had been applied in 1976, the total cost of contributions and taxes directed toward all of the specified programs would have increased from 11.8% of total earnings to an amount 'somewhat under' 13.7%. (The reason the amount of this increase is covered in these tentative terms is set out in the Note to Table XII-2.)

The estimated cost of the C/QPP expressed as a percentage of all earnings would be still higher if the maximum amount of pensionable earnings covered by the plans (the YMPE) had reached the present target level of average wages and salaries (AWS). As shown in Line 3, the cost of contributions to the C/QPP in these circumstances would have risen from 3.9% of total earnings to 4.3%. This increase, however, would have been partially offset by a decline in the cost of income-tested programs from 1.2% of total earnings to 1.0%. As a result, the total cost of all programs under these circumstances would be somewhat less than 13.9% of total earnings.

(3) This estimate of the full cost rate is based on the assumption of a long-run inflation-adjusted return on investment of 3 1/2%.

Table XII-2

Estimated Amount of Contributions or Taxes Directed to Major Retirement Income Programs Under Several Assumptions, as a Percentage of Total Earnings

	C/QPP	OAS	Income- Tested	Total Public Programs (%)	RPPs(1)	RRSPs	Total
1. Actual 1976	2.0	2.9	1.2	6.1	3.8	1.9	11.8
2. Actual 1976 with C/QPP valued on basis of benefit accrual (full cost)	3.9	2.9	1.2	8.0	<div style="border: 1px solid black; padding: 5px;"> see note below <3.8 <1.9 <13.7 <3.8 <1.9 <13.9 <3.8 <1.9 <14.9 <3.8 <1.9 <18.6 </div>		
3. Actual 1976, with C/QPP mature so that YMPE=1 AWS, on basis of benefit accrual	4.3	2.9	1.0	8.2			
4. Full current service cost, mature basis, for present pension system, including OAS and income- tested elements	4.3	3.8	1.1	9.2			
5. Enlarged mandatory system - <u>included</u> here with C/QPP; no displacement assumed	8.8	3.8	0.3	12.9			
6. Enlarged mandatory system - <u>included</u> here with C/QPP; with illustrative displacement	8.8	3.8	0.3	12.9	1.3	1.0	15.2

< = less than.

(1) Excludes cost of amortizing unfunded liabilities (1.2% of total earnings in 1976).

Note: Rising levels of contributions required for the present C/QPP arrangements and for an enlarged mandatory program may be expected to displace some portion of contributions to RPPs and RRSPs. No allowance has been made for this reduction in Lines 2 through 5, but Line 6 illustrates the situation if the proportion of RPP contributions displaced were about two-thirds and the proportion of RRSP contributions displaced were about half.

The purpose of Line 4 is to illustrate the long-run costs of the system under circumstances where they would not be affected by future changes in the age structure of the population. For this purpose, the pay-as-you-go costs of the OAS and the income-tested programs were recalculated on the full cost basis so that each new entrant to the labour force would pay fully for the benefits he could be expected to receive in retirement.⁽⁴⁾ Because the ratio of elderly to the work-age population in 1976 was relatively low, the effect of the calculation is to raise the cost of the OAS as a percentage of total earnings from 2.9 to 3.8% and that of the income-tested programs from 1.0 to 1.1%. Line 4 of the table estimates the long-run cost of the existing public pension programs at 9.2% of total earnings. The long-run cost of all major retirement income programs, public and private, is estimated to be somewhat less than 14.9%.

Lines 5 and 6 of the table, which provides an estimate of the cost of all major programs assuming an enlarged mandatory earnings-related plan, is discussed in the section that follows.

2. The Total Cost of Reform. What would be the impact on costs of adopting any of the four broad alternative policy approaches to reform outlined earlier in the report?

Line 5 of Table XII-2 is a first step toward estimating the implications of adopting an enlarged mandatory system designed to maintain pre-retirement living standards for middle-income people. For convenience only, Option 4 is costed first. It will be seen from the table that if this option were adopted, the full cost of mandatory earnings-related pensions would more than double - rising from an estimated 4.3% of total earnings for current service to 8.8%. This increase in cost would be offset to a modest extent by reductions in other parts of the public system. In particular, it is estimated that the adoption of the larger C/QPP would result in the full cost of income-tested programs declining from 1.1 to 0.3% of total earnings. The net effect would be an increase in the total cost of public programs from 9.2 to 12.9% of total earnings. If such a system had been in effect in 1979, the estimated increase in cost of public pension programs on the basis described would be in the order of \$5.5 billion.

The 'less than' signs in Lines 2 through 5 indicate that as contributions to mandatory pension plans rise, contributions to private arrangements would decline. Without such displacement, and with full costs for the enlarged mandatory system being charged, retirement income programs would absorb some 18.6% of earnings - over 50% more than current outlays.

To a significant extent, however, this growth in costs of the public system would be offset by reductions in private costs as a result of the partial displacement of employer-sponsored pension plans and RRSPs. While the amount of the displacement cannot be determined with any precision, for present purposes Line 6 shows the situation if

(4) The assumption is made that OAS and income-tested programs maintain the same relationship to average wages and salaries in future as they did in 1977.

the enlarged system were to displace about two-thirds of contributions to RPPs and about one-half of contributions to RRSPs. On that basis, the total costs of RPPs and RRSPs would be reduced from something under 5.7% of total earnings to 2.3%; and with that assumption, therefore, it is estimated that the total current service cost of the system with larger C/QPP would be 15.2% of total earnings, whereas the full current service cost of the existing system on a mature basis is estimated at something under 14.9%.

At first glance, this increase may appear to be surprisingly small. However, it is important to note three points. Firstly, the comparison is not between 14.9% of total earnings and 15.2%. It is between "something under 14.9%" and 15.2%. A firm figure on the full current service cost of the existing system is not provided because of the difficulty in estimating the extent to which payments now being made for employer-sponsored pension plans and RRSPs would be displaced by higher costs for the existing C/QPP. (As noted, Line 6 illustrates the situation if about one-half of contributions to RRSPs and about two-thirds of contributions to RPPs were displaced by the enlarged system.) Secondly, it is estimated that the enlarged C/QPP would also displace well over half of the expenditure on income-tested programs. Finally, it is worth bearing in mind that one percentage point of earnings amounted to about \$1.5 billion in 1979, and cost increases which appear to be trivial in percentage terms may in fact represent very significant sums.

The cost of a reformed system based on Option 4 is predicated on the estimated amount of consumption that new entrants to the labour force would be required to forgo on average during their working years (as a result of pension contributions or tax payments made by themselves or, on their behalf, by employers) in order to receive benefits that would maintain their living standards in retirement.⁽⁵⁾ This estimate does not include the additional cost that would be involved in making such benefits available to those who have already entered the labour force. Like the other full cost rates shown in the table, those in Line 6 are based on an inflation-adjusted rate of return on investments of 3 1/2%. If an inflation-adjusted return of 2% had been adopted, the total cost of the retirement income system shown in Line 6 would rise from 15.2% of total earnings to around 22%.

If Option 3 - mandatory employer-sponsored plans - were adopted as the means of maintaining pre-retirement living standards, total costs would be similar to those of an expanded public program, as shown in Line 6 of the table. However, the costs of C/QPP would be lower and those for RPPs correspondingly higher. If Options 1 or 2 formed the basis of policy, the effect in terms of aggregate costs is difficult to determine, but the impact would likely fall somewhere between those shown in Lines 4 and 6.

(5) The partial offset provided by the increased deductibility from taxes of higher pension contributions has not been taken into account on the assumption that other taxes would be increased in order to maintain total government revenues.

3. The Varying Costs of Reform. Table XII-3 provides an estimate of the minimum and maximum costs of each of the four options for individual employers and their employees, summarizing data provided in earlier chapters.

Table XII-3

Estimated Total Additional Cost Associated with Four Options
For Individual Employers and Employees

Minimum		Maximum	
Options 1 and 2	little or no additional cost for those: - who have no plans - who discontinue plans - who have excellent plans - who offset fully costs of additional regulatory requirements with reduced basic or other benefits	Option 1	up to 6% of <u>covered</u> payroll for those with plans: - where pensions-in-pay and deferred pensions are not adjusted for inflation - that lack survivorship provisions other than a limited guarantee period
			the distribution of added cost between employer and employee would ultimately be determined in negotiation
		Option 2	for a typical defined contribution plan, less than 1% of <u>covered</u> payroll since only earlier vesting would add to costs
Options 3 and 4	little or no cost for those: - in 'more expensive' employer plans - saving adequately for retirement in RRSPs or in other vehicles provided the enlarged mandatory plan is a substitute for the current pension or savings arrangements	Option 3	joint employer/employee contributions in the range of 4.9-5.0% of <u>covered</u> payroll or about 4.7-4.8% of <u>total</u> payroll, shared approximately equally(1)
		Option 4	joint employer/employee contributions of around 4.5% of <u>total</u> payroll shared approximately equally(2)

(1) The employee contribution equals 4% of payroll up to 1.5 times AWS less C/QPP contribution. This employee contribution amounts to about 2.4% of total payroll. (The 4% figure would rise with an increase in C/QPP contribution rates.) The employer contribution is approximately 2.3-2.4% of total payroll, apart from C/QPP contributions.

(2) The figure of 4.5% is equal to the difference between the amounts in Lines 4 and 5 of the C/QPP column of Table XII-5.

As already indicated, and as implied in Table XII-3, it is not possible to generalize about the additional costs associated with Option 1. There are two reasons why this is the case. Firstly, employers would not be required to provide pension plans under this option. Consequently, no increase in costs would be involved for the many small employers who continued to offer no plan. Furthermore, there would obviously be a reduction in pension costs for those employers currently sponsoring pension plans who decided to discontinue them rather than assume the additional obligations that would be required under Option 1. Secondly, many of the employers now providing generous plans would be unlikely to incur significant additional costs because they would already be providing relatively early vesting, adequate survivor benefits, and some adjustment of pension payments for inflation.

Employers now offering relatively modest plans would be most likely to incur significant additional costs. As shown in Table VI-3, cost increases for early vesting and adjustment of deferred pensions and pensions-in-pay for inflation could add as much as four percentage points of covered payroll to the cost of a 2% final average pay plan. A two-thirds survivorship provision might add a further one to two percentage points, resulting in added costs for current service of up to 6% of covered payroll. In practice, most employers would attempt to offset these increases by negotiating higher employee pension contributions or by reducing basic benefits.

It should be noted that the estimated cost of up to 6% of covered payroll involved in implementing Option 1 is higher than the costs estimated for Options 3 and 4. This comes about because the plan adopted for purposes of calculating cost increases associated with Option 1 would provide higher basic benefits (i.e. 2% final or best average plans) than the model plans adopted for Options 3 and 4. A middle-income earner who has 35 years of pensionable service in a 2% final average plan would end up with significantly higher living standards after retirement than before.

In the case of the defined contribution approach embodied in Option 2, any increases in costs would be small. Requirements to maintain the real value of pensions-in-pay and to provide survivorship benefits would not necessitate increases in contributions to such plans. These requirements would simply alter the timing of the payments and their distribution. The provision for full and immediate vesting in Option 2, if added to the model money purchase plan specified in Chapter III, would increase employer costs by 1% of payroll.

The additional cost of implementing Option 3 in respect of employees entering at age 21 is estimated to amount to around 4.7-4.8% of total payroll for individual plans, a cost that would be shared between employers and employees. This is in addition to the costs of the C/QPP. For employers currently providing good plans the adoption of Option 3 would require little additional expenditure, but the full amount would be faced by employers and employees where no pension plan

is now in operation. For the enlarged C/QPP provided for in Option 4, the total additional cost is also estimated to amount to about 4.5% of payroll.(6) Again, this would involve little increase in costs for employers and employees already associated with generous plans, which presumably would be reduced to take account of the enlargement of the public program. The full impact would be borne by employers and employees where no plan currently exists. As indicated previously, these estimates are predicated on a 3.5% rate of return on investments after adjustment for inflation and would vary if different assumptions were adopted with respect to the inflation-adjusted return.

Table XII-2 provided aggregate data on the costs of the retirement income system as it might evolve under various scenarios. In that table the costs were expressed as a percentage of total earnings in the economy. Table XII-3 showed what the minimum and maximum impacts were likely to be on employers and their employees. In this case the costs were expressed as a percentage of the payroll of the employers concerned. Table XII-4 shows how the implementation of Options 3 and 4 - the enlarged, earnings-related pension system - could affect the level of pension contributions required in respect of employees at various earnings levels, depending on whether they are currently non-members of employer-sponsored pension plans, or members of 'less expensive' plans, or members of 'more expensive' plans. In this case, the costs are expressed as a percentage of the earnings of the individual employees.

The first line of the table shows actual current outlays for the C/QPP and other earnings-related pensions. The second line indicates the full cost contribution rate required to finance the larger earnings-related pension system implied in Options 3 and 4. The bottom line shows the amount of increase between the first two. Note that the increase in the bottom line reflects two things which are not shown separately: firstly, changing contribution rates for existing plans from the current rates to full cost rates; and, secondly, increasing the size of the mandatory earnings-related pensions.

(6) Since Options 3 and 4 were designed to produce roughly equal amounts of retirement income and similar assumptions were adopted, it is not surprising that the indicated costs of these options are similar. Such differences as might emerge with respect to the costs of Options 3 and 4 are explained primarily by certain variations in design features. For example, the provisions for members who die or become disabled before retirement are better (and more costly) under Option 3 than Option 4, while the provision for dropping out years of low earnings under the C/QPP and the transfer effect resulting from the YBE tend to add to the costs of the public programs. The net effect is to make Option 3 a little more costly than Option 4.

Table XII-4

Estimated Contributions Made by and on Behalf of Employees at Four Earnings Levels
to Current Earnings-Related Pension Plans and Contributions Required for an Enlarged Mandatory Plan
(Total Contributions as a Percentage of Employee Earnings)

	Non-Member of Employer Sponsored Plan					Member of Less Expensive Employer-Sponsored Plan(1)					Member of More Expensive Employer-Sponsored Plan(1)				
	(employee earnings level in relation to average wages and salaries (AWS) 1977)														
	0.5 AWS	1.0 AWS	1.5 AWS	2.5 AWS	3.5 AWS	0.5 AWS	1.0 AWS	1.5 AWS	2.5 AWS	3.5 AWS	0.5 AWS	1.0 AWS	1.5 AWS	2.5 AWS	3.5 AWS
Current contributions to earnings-related pension plans (including C/QPP)	3.1	2.3	1.5	0.9		7.8	7.5	7.2	6.9		12.1	12.1	12.0	11.9	
Full cost contributions to enlarged earnings-related pension plans(2)	10.0	11.2	11.6	7.0		10.5	11.7	12.2	9.9		12.1	13.3	13.8	13.0	
Increase in contributions required for enlarged earnings-related plans	6.9 (\$455)	8.9 (\$1,175)	10.1 (\$1,990)	6.0 (\$1,990)		2.6 (\$175)	4.2 (\$555)	5.0 (\$990)	3.0 (\$990)		0 (\$0)	1.2 (\$155)	1.8 (\$360)	1.1 (\$360)	

(1) See following text for description of less expensive and more expensive employer-sponsored plans.

(2) See following text for assumptions regarding displacement of employer-sponsored plans.

The first four columns in Table XII-4 indicate the situation for people at four different earnings levels who are not now members of employer-sponsored pension plans. The C/QPP currently replace 25% of pre-retirement earnings up to about 70% of AWS. For the person whose earnings are average (1.0 AWS, which in 1977 amounted to \$13,200), the current C/QPP contribution rate of 3.6% amounts to only 2.3% of total earnings because not all of the amount earned in the year is subject to contributions. (In 1977, this would have amounted to 2.3% of AWS - \$302.) (7) The enlarged mandatory earnings-related plan has been assumed to replace 45% of pre-retirement earnings up to 1.5 times average wages and salaries. The full cost contribution rate on covered earnings is estimated at 12.4%. (8) For those with average earnings who were not members of employer-sponsored plans, this would require a contribution amounting to 11.2% of the total earnings of the employee, since the first 10% of their earnings would be exempt from contributions. For those receiving average wages and salaries, this increase from 2.3 to 11.2% of earnings represents a rise of 8.9 percentage points, equivalent in 1977 to \$1,175, shared between the employer and employee. As the table indicates, the increase in contributions required in respect of those who were not members of employer-sponsored plans varies according to their earnings level.

The second and third groups of columns in the table provide cost data for those who are currently members of employer-sponsored pension plans. For purposes of the table, two composite plans designated as 'less expensive' and 'more expensive' were constructed using employee contribution and employer contribution data drawn from Statistics Canada's Pension Plans in Canada, 1976. The 3.9 million members of employer-sponsored pension plans were divided into two equal groups on the basis of the relative richness of their plans. The group in the less expensive plans contains the members of contributory plans that had low employer contribution rates and the bulk of members in non-contributory plans. The group in the more expensive plans contains those who belong to plans with high employee contribution rates and those belonging to non-contributory plans which provided substantial benefits. A single plan contribution rate (composed of contributions by employer and employee) was calculated for each group. (9) These contribution rates, combined with the C/QPP contribution rates, represent 'contributions to current earnings-related pension plans' for members of employer-sponsored plans.

(7) In 1977, the Year's Basic Exemption was \$900 and the Year's Maximum Pensionable Earnings was \$9,300.

(8) These design features correspond to the 45% C/QPP described earlier. The enlarged mandatory arrangement may also, of course, refer to a legislated expansion of private plans.

(9) The two composite plans each group together a wide range of plans with varying characteristics - integrated plans and non-integrated plans, contributory and non-contributory plans, etc. While no plan member is a member of a plan with the characteristics of either of the composite plans, the contribution rates on which the data in Table XII-4 are based represent the average situation for those in less expensive and for those in more expensive plans.

The first line of the table indicates that, in respect of those in less expensive plans, employer and employee contributions to those plans and to the C/QPP range from 6.9-7.8% of total earnings depending on the earnings level. For those in more expensive plans the corresponding figure is estimated at between 11.9-12.1% of total earnings.

Under an enlarged mandatory plan requiring a contribution rate of 12.4% of covered earnings, employers and employees would not continue to contribute at the same level to their existing plans as well as to the new mandatory plan. Some part of existing plans would either be displaced by or become part of the mandatory plan. As in the case of Table XII-2, it is assumed that about one-third of the funds now flowing to employer-sponsored plans would continue to flow to such plans even after an enlarged mandatory plan, involving the charging of full cost rates, was in place.(10)

For those in less expensive employer-sponsored plans, the last line of the table shows that an enlarged mandatory plan would involve increases in contributions amounting to between 2.6 and 5.0 percentage points of the total earnings of the employees concerned, based on the assumptions adopted about the extent of displacement of the existing plan. The smallest relative increases would be experienced by those at the low and high ends of the earnings scale. In respect of those earning average wages and salaries in 1977, the increase would be 4.2% of the employee's earnings, some \$555.

For those in more expensive plans, the additional cost of an enlarged mandatory system is estimated to be quite moderate, ranging from zero to 1.8 percentage points of earnings. In respect of those earning average wages and salaries in 1977, the figure would have been 1.2% of the employee's earnings, some \$155.

Table XII-4 indicates that the implementation of an enlarged, earnings-related pension plan charging full cost rates would entail increases in contributions that vary with earnings levels and with the nature of the employer-sponsored pension, if any, to which an employee now belongs. It is important to emphasize that a part of the increases shown is associated with higher contributions required to be made in future to the existing C/QPP.(11) Those who are not members of employer-

(10)About two-thirds of the amount continuing to flow to private plans is estimated to be in respect of earnings lying above the 1.5 AWS earnings ceiling of the enlarged mandatory plan. The rest is estimated to be in respect of various ancillary benefits that would not likely be displaced by an enlarged mandatory plan, such as benefits in respect of retirement before age 65, and survivorship provisions in respect of death of members before age 65. The value of the ancillary benefits in the more expensive plans was assumed to be twice that of those in the less expensive plans.

(11)For non-members of employer-sponsored plans, between 27-45% of the reported increases (depending on earnings levels) are associated with expected increases in contributions to the present C/QPP.

sponsored plans would face significantly larger increases than would those who are. And those who are members of more expensive employer-sponsored plans would experience little or no increase in costs.

To summarize the first three sections of this chapter, Table XII-2 shows that in order to cover the full current service of the public portion of the existing system on a mature basis it would be necessary for contributions to increase from 6.1% of all wages, salaries and earnings from self-employment to 9.2%, a rise of 3.1 percentage points. Adoption of an enlarged mandatory system would further raise the cost to 12.9% of earnings. If the enlarged mandatory earnings-related pension system displaced none of the contributions to RPPs and RRSPs, funds directed to retirement income purposes would amount to some 18.6% of earnings, over 50% more than current outlays. If, however, displacement occurred at the level illustrated in Line 6 of Table XII-2, the aggregate increase in costs associated with an enlarged mandatory pension system would be much smaller. The aggregate costs of Options 1 and 2 would be less again given the absence of compulsory plan membership.

The impact of an enlarged mandatory earnings-related system would not bear equally on all employers and employees. In the case of those with average earnings, the additional costs of the enlarged mandatory plan could range all the way from zero to around ten percent of the employee's earnings, depending on the extent of contributions currently made to private plans. If current practices were followed, these increased costs would be split between employers and employees. The impact of increased contributions would be partly offset by increased deductions from taxable income and in taxes otherwise payable (although conceivably tax rates might well be increased to maintain government revenues).

4. Offsetting the Impact of an Enlarged Mandatory Plan on Low-Income Earners. If the earnings-related pension system were expanded along the lines of Options 3 or 4, significantly larger pension contributions would be required than are now being paid by many workers - especially those who are not members of employer-sponsored plans. This would create serious problems for families with low earnings. The full cost contribution rate of an enlarged earnings-related pension was estimated above to be equal to 12.4% of covered earnings. For persons with wages equal to one-half of average wages and salaries (around \$6,600 in 1977), assuming they were required to pay their half of that 12.4% rate, the outlay in 1977 would have been around \$330 - about \$230 more than they actually were required to pay in C/QPP contributions.⁽¹²⁾ In this connection, it is worth noting that a person with income at that level and with a family to support would not have paid any federal or provincial income tax in that year.

If low-income families were required to participate in an enlarged earnings-related pension system, the amount of any contributions they made for the increased benefits would reduce the disposable income available to them during their working lives. Moreover, the enlarged

(12) This increase is made up of about \$85 to provide for the full cost of the current C/QPP and about \$145 in respect of the enlargement.

earnings-related pension that they would receive after retirement would reduce their entitlement to the Guaranteed Income Supplement (GIS) and other income-tested programs. Thus, a decision to enlarge the mandatory earnings-related pension would actually adversely affect low-income families over their lifetime unless special provision were made to take account of their particular circumstances.

Two approaches are available to shield such families from those outcomes. The first, the exemption approach, would exempt low-income earners from the contributions and benefits associated with the incremental portion of the enlarged mandatory plan. Under the second approach, subsidies would be paid from the general revenues of the government, or by other plan members, in respect of pension contributions paid by those with low earnings.

a) The Exemption Approach. Under this approach, benefits and contributions would vary by earnings level. A 25% pension would continue to be paid in respect of all earnings. In addition, a further 30% pension, for example, would be paid in respect of earnings in excess of one-half of the AWS (up to the 1.5 AWS ceiling). The appropriate full cost contribution rates would be charged. Under this approach, those earning around half the average wages and salaries throughout their life would receive a pension replacing 25% of these earnings. Those whose earnings were average throughout their lifetime would receive a 40% pension (25% + 1/2 of 30%); and those with earnings at the 1.5 AWS level would receive a 45% (25% + 2/3 of 30%) pension.

A variant of this approach would be to require that all contributions on earnings below one-half AWS be paid by employers with the normal splitting of contributions required in respect of earnings in excess of that amount; those with very low earnings (less than one-half AWS) would pay no contributions. Here, employers would be paying significantly more than one-half of pension contributions. Given the uncertainty surrounding the incidence of pension contributions, it is not clear what the final effect of this approach would be on the disposable incomes of those with low earnings.

The exemption approach could apply in respect of Option 3 or Option 4.

b) The Subsidy Approach. Under this approach, all participants would receive pensions that replace 45% of average adjusted pre-retirement earnings. Contributions, however, would be related to earnings in one of two ways.

Under the first variant of this approach, all participants would pay the same contribution rates in the first instance; part of these contributions would be returned to low-income taxpayers through a refundable tax credit administered through the income tax system. Here, taxpayers in general would be providing the subsidy to those with low earnings. This form of the subsidy approach could be used in conjunction with Option 3 or Option 4.

A second variant of the subsidy approach would be to utilize a contribution rate schedule where higher C/QPP contribution rates were paid on higher levels of earned income. Here, the subsidy received by those with low earnings would come from all other contributors. This form of subsidy could only be used in conjunction with Option 4. (Raising the Year's Basic Exemption is one of several ways of implementing this variant.)

c) Conclusions. An earlier chapter indicated that when all taxes, premiums and transfers were taken into account, the current public retirement income system was redistributive over the lifetime of its participants. Given the earnings-related focus of Options 3 and 4, their adoption would render the retirement income system less redistributive. This section has briefly noted some special measures that could be taken under Options 3 and 4 to alleviate any undue burden on those with low earnings. The exemption system would leave those with low earnings in the situation in which they are now - contributing to a 25% C/QPP during their working lives and receiving substantial GIS benefits in retirement. Under the subsidy approach those with low earnings would receive the bulk of their subsidies during their working lives; the GIS would play a much smaller role.

No final position is taken here on which of the two approaches is preferred. The administrative requirements of the exemption approach are small and, as noted, it could be used in conjunction with either Option 3 or Option 4. The subsidy approach would require the inauguration of a new refundable tax credit or contribution rates would have to be varied with earnings (in the second case the subsidy approach could not be used with Option 3). The subsidy approach would lead to a much smaller GIS program, but it also entails a marked departure from a self-financing earnings-related pension system.

B. Effects on Governments

The analysis of the financial implications for governments of the retirement income system is divided into the following sections: (1) the effect on government expenditures of changing demography; (2) the effect on government expenditures of an enlarged mandatory pension system; (3) the effect on government revenues; (4) the revenue-expenditure balance of governments with respect to the retirement income system; and finally, (5) the effect on governments, as employer, of specific proposals involving their own employees.

Before examining these particular financial effects, it is necessary to provide a broad framework against which they can be considered. Table XII-5 provides such a framework. It shows cash transfers by the federal and provincial governments and by the C/QPP to the elderly in relation to total public expenditures. In 1976, these transfers absorbed 3% of Gross National Product (GNP) and all other public expenditures amounted to 37.2% of GNP, bringing total expenditures of all levels of government to 40.2% of GNP.

In assessing the cost of the retirement income system on governments, it is important that attention be focused not only on current costs, and the effect of policy changes on those costs, but also on the financial impact resulting from the changing age structure of the population. Table XII-5 assists in the analysis, by showing the effect of changing demography on government outlays, both for the elderly and for all other age groups, in the absence of policy changes. (OAS/GIS benefit levels are assumed to be linked to wages.) A subsequent table, Table XII-6, shows the effect on government expenditures of the enlarged, mandatory pension system also taking account of changing demography. The data in Table XII-5 are consistent with those shown earlier in Table IV-4. The summary at the bottom of Table XII-5 shows that by the year 2031, cash transfers to the elderly will rise to an estimated 10.1% of GNP (more than triple the 1976 figure of 3.0%). Although rising expenditures on the elderly are partially offset by some reduction in other expenditures, the net effect is a substantial increase. The last line shows estimated expenditures as a percentage of GNP growing from 40.2 to 44.8% of GNP.

The right side of Table XII-5 shows the present and estimated future size of transfer programs for the elderly as a share of federal and provincial expenditures. These data, in particular, help to establish the basis for the analysis which follows. This analysis treats the C/QPP as institutions apart from the federal and provincial governments; the impact of these plans on taxpayers (as contributors) has already been discussed in the preceding part of this chapter.

Table XII-5

The Effect of Projected Demographic Changes Only on Government Expenditures for Public Pension Programs and for all Other Purposes

Programs	Programs as a Percentage of Gross National Product			Programs as a Percentage of Government Expenditures		
	1976	2001	2031	1976	2001	2031
Federal						
OAS	1.8	2.0	3.8	8.6	10.7	17.3
Income-tested pensions	0.5	0.5	1.0	2.7	2.8	4.6
Sub-total	2.3	2.6	4.7	11.3	13.5	21.9
All other	18.1	16.4	16.9	88.7	86.5	78.1
Total Federal	20.4	19.0	21.7	100.0	100.0	100.0
Provincial						
Income-tested pensions	0.1	0.1	0.2	0.7	0.8	1.4
All other	14.6	12.5	13.7	99.3	99.2	98.6
Total Provincial	14.7	12.6	13.9	100.0	100.0	100.0
Total local	4.5	3.9	4.1	100.0	100.0	100.0
Total C/QPP	0.6	2.7	5.2	100.0	100.0	100.0
<u>Summary</u>						
OAS, income-tested pensions and C/QPP	3.0	5.3	10.1	7.5	14.0	22.5
Other expenditures of governments	37.2	32.9	34.7	92.5	86.0	77.5
Grand Total	40.2	38.2	44.8	100.0	100.0	100.0

Note: Numbers may not add due to rounding.

1. Effects of Changing Demography on Government Expenditures.

a) Federal. The payment of OAS benefits constituted about 8.6% of federal government expenditures in 1976 and GIS benefits a further 2.7%. On the basis of the demographic projections used generally in this report, and assuming that future federal expenditures will reflect only changes in the age distribution of the population, the shares of federal expenditures accounted for by OAS/GIS will rise from 11.3% in 1976 to levels of 13.5% in 2001 and 21.9% in 2031. (If higher birth rates and larger immigration had been postulated, the percentages for 2001 and 2031 would be lower.) In 2031, the share of GNP absorbed by OAS/GIS will be 2.4 percentage points larger than in 1976, or about double.

Because of the effects of changes in the age distribution of the population on other federal government programs, the overall increase in federal government expenditures would be smaller than that resulting from OAS/GIS alone. The total would rise from 20.4% of GNP in 1976 to 21.7% in 2031. Some part of the increased outlays for OAS will be recovered by the governments through taxation of personal income, as shown later in Table XII-7.

b) Provincial. The effect of the changing population structure would be to reduce provincial expenditures as a proportion of GNP from 14.7% in 1976 to 13.9% in 2031. An increase in the relative cost of income-tested pensions would be more than offset by a decline in all other provincial expenditures.

2. Effect on Government Expenditures of an Enlarged, Mandatory Earnings-Related Pension System.

a) Impact on Expenditures. Table XII-6 projects expenditures on retirement income programs of the federal and provincial governments between 1976 and 2031, both if the present retirement income system were maintained and if an enlarged, mandatory earnings-related system were adopted. Since the expenditures for the enlarged system itself, whether private (Option 3) or public (Option 4), would not be paid for out of governmental budgetary revenues, they are excluded here. They were covered in the first part of this chapter.

Table XII-6

Estimated Federal and Provincial Government Expenditures
under the Present Retirement Income System and
an Enlarged Mandatory System, 1976-2031

	Present System			Enlarged Mandatory System	
	1976	2001	2031	2001	2031
As a percentage of GNP					
By program					
OAS (\$3.4 billion 1976)	1.8	2.0	3.8	2.0	3.8
GIS (\$1.1 billion 1976)	0.5	0.5	1.0	0.1	0.2
Provincial income-tested supplements (\$0.2 billion 1976)	0.1	0.1	0.2	—	—
Total	2.4	2.7	4.9	2.2	4.0
As a percentage of government expenditures					
By level of government					
Federal	11.3	13.5	21.9	11.6	19.1
Provincial	0.7	0.8	1.4	0.2	0.3

Note: Numbers may not add due to rounding.

It will be evident from the table that the effect of adopting an enlarged mandatory pension system would be to reduce moderately the proportion of government expenditures on retirement income. At the federal level, OAS outlays would remain unchanged from those projected under the existing system, but expenditures of both the federal and provincial governments on income-tested programs would decline in comparison to the non-enlarged system. Whereas federal expenditures on retirement income under the present system would account for 21.9% of all spending by 2031, under an enlarged system the proportion would be reduced to 19.1%. At the provincial level, the proportion would be reduced from 1.4% of total expenditures to 0.3%.

The expenditure projections contained in Table XII-6 make no allowance for possible changes in borrowing costs which might arise from changes in the retirement income system. The impact on borrowing costs of the federal government is likely to remain relatively small since more than 95% of the assets of the CPP are loaned to provincial governments. In contrast, the CPP has been a major source of provincial financing. The extent to which those governments would be required to borrow on the market and to face higher borrowing costs, however, is linked closely to the issue of future financing of the CPP and QPP - a subject that is examined in the next chapter.

b) Impact on Non-Budgetary Position. If it were decided to introduce an enlarged mandatory system based on employer-sponsored pension plans, it might be necessary for the government to assist the private sector in indexing their plans. Several policy alternatives for providing such assistance were discussed in Chapter IX. The main effects of the establishment of a stabilization facility would be on the federal non-budgetary position. On a year-to-year basis, there could be substantial non-cash credits or debits as a result of the operation of such a mechanism, but over the long haul the net effect should not be substantial.(14)

3. Effects on Government Revenues. Government revenues are affected by the deferral of taxation on contributions to, and on the accrual of income within, various retirement income vehicles. They are also affected by specific exemptions and deductions relating to the income of the elderly.(15)

(14) The other mechanisms requiring financial involvement by government - real rate annuities and indexed bonds - necessitate year-by-year cash outlays and have no built-in device to adjust automatically to changing real rates of investment return. For these reasons, if they were favoured, consideration should be given to treating the transactions which would result as budgetary rather than non-budgetary.

(15) These retirement income vehicles include the C/QPP, RPPs and Deferred Profit Sharing Plans (DPSPs). In the case of RRSPs, only the contributions of individuals are deductible. In the case of DPSPs, only the contributions of employers are deductible, and the amounts involved are relatively very small.

The estimates contained in Table III-5 indicated that in 1976 roughly \$3.6 billion in federal and provincial personal income taxes were forgone or deferred as a result of such programs.(16) The revenue cost for corporate income tax revenues is not as large.(17) As a very rough measure, it appears that such revenues may have been affected by some \$300-600 million in 1976 as a result of the deductibility of employer contributions to RPPs. Because of the uncertainty involved, the effects of deductibility of employer contributions are not pursued further.

The stream of benefits ultimately generated by plans will likely grow faster in the future than will contributions. But the rate of taxation applied to those benefits is also likely to be lower on average than the rate that would otherwise have been payable on the tax-deductible contributions and tax-exempt investment returns that give rise to these benefits.

Table XII-7 outlines the estimated net effect on federal and provincial government revenues between 1976 and 2031 of these two offsetting tax effects and of changing demography under the present retirement income system and under an enlarged mandatory system as envisaged under Options 3 or 4. The net revenue effect is the balance between revenue forgone by the government as a result of the various income tax deductions

(16) Calculated on the post-1977 federal-provincial fiscal arrangements.

(17) There are several reasons for this. Firstly, about half of the employer contributions to RPPs come from the public sector, large parts of which are not subject to income tax. Secondly, some employers in the private sector have no taxable income. C/QPP, RPP and DPSP contributions from these employers, therefore, have no direct impact on government revenues. Thirdly, in the case of employers who do have taxable income, the impact on corporate tax revenues of the deductibility of the contributions from income before tax is not clear. To the extent that employers are concerned about the total compensation they pay their employees and not the particular forms of compensation, there is little or no effect, since employer costs are deductible whether employees are compensated with wages, bonuses of one form or another, or through a pension plan. On the other hand, regardless of whether the employer is taxable or not, employee compensation taken in the form of pension rights, rather than wages and salaries, defers revenues from personal income taxes. In 1976, for example, if employers had not made any pension contributions on behalf of their employees and had not adjusted current wage and salary levels upwards (i.e. a total compensation policy was not followed), federal corporate income taxes would have risen by about \$300 million, while personal income tax revenues would not have changed. However, if the reduction in employer contributions had been matched by an equivalent increase in wages and salaries, federal corporate taxes would have been unchanged, while personal income tax revenues would have risen by about \$600 million. Thus, estimates of the tax revenue deferred as a result of the deductibility of employer contributions depend on the nature of the compensation process. (Also, for convenience only, the revenue effects are referred to in the text as occurring under the corporate income tax. This ignores the possibility that the current provisions for employer deductibility, insofar as they influence the form of employee compensation packages, may also affect personal income tax revenues.)

and exemptions, and revenue accruing to the government as a result of the taxation of income in the form of pension or annuity benefits. In the case of existing RPPs and RRSPs, the table also provides some indication of the impact on tax revenues if the present private pension system were partially displaced by an enlarged public or private system.

Although the estimates are based on simple extrapolations, (18) they embody a wide range of factors. By way of example, the data for the C/QPP in Table XII-7 shift from a net reduction of personal income tax revenues equivalent to 0.1% of GNP in 1976 to a net increase equivalent to 0.4% in 2031 given the maintenance of the present retirement income system, and to an even larger figure if there were an enlarged mandatory system. Personal income tax revenues increase for several reasons: the number of elderly will rise and a larger proportion of them will be entitled to benefits under these programs; benefit levels will rise as the YMPE of the C/QPP reaches its designed ceiling; and marginal tax rates of the elderly will rise with the larger amounts of income accruing to them. Working in the opposite direction will be reductions in tax revenues from the work-age population. Larger amounts of C/QPP contributions will be deductible from the personal income tax base because of the increased proportion of earnings subject to contribution (as the YMPE rises) and of the higher C/QPP contribution rates which can be anticipated, as well as the larger work-age population. Higher marginal tax rates will be applicable to these amounts as the proportion of contributions coming from higher-income levels rises. On balance, however, the revenue gains will grow much faster than the revenue losses, with the result that the C/QPP will, insofar as the tax effects of contributions and benefits are concerned, add to rather than reduce personal tax revenues.

It will be noted that the impact of the assumed demographic changes on the present retirement system is to increase fractionally the net amount of personal income tax revenue forgone by governments between 1976 and the turn of the century. By 2031, however, there would be a reduction in the net revenue loss in relation to GNP. But under the enlarged system, the net revenue loss would become negligible by 2031, declining to only 0.1% of GNP. In both cases, the revenue loss would have been somewhat greater if greater population growth had been assumed.

(18) The projections in this and subsequent tables in this section are based on simple extrapolations. The main factors embodied in them, apart from assumptions with respect to the marginal rates of income tax applicable under the existing tax system, are the postulated changing age structure of the population, the use of full cost contribution rates for new entrants to the C/QPP, the growth of the YMPE of the C/QPP in accordance with its present design and, under the enlarged mandatory system, changes in benefits and displacement of part of the present private arrangements. An inflation-adjusted rate of return of 3 1/2% is assumed. The revenue impacts displayed are 'first round' effects only. Because of the difficulty of estimating them, and the uncertainty surrounding them, subsequent multiplier and general equilibrium effects have been ignored.

Table XII-7

Estimated Net Effects of the Retirement Income System on
Personal Income Tax Revenues of Federal and Provincial Governments

	Present System			Enlarged Mandatory System	
	1976	2001	2031	2001	2031
As a percentage of GNP					
By program					
OAS	0.1	0.1	0.2	0.1	0.3
C/QPP	-0.1	0.0	0.4	0.2	0.9
Existing RPPs & RRSPs	-0.5	-0.4	-0.1	-	-
Enlarged mandatory plans	-	-	-	0.3	1.0
Supplementary private arrangements	-	-	-	0.0	0.1
Tax deferral of investment income within above plans	-1.2	-1.5	-1.5	-2.1	-1.8
Age exemption, pension deductions & transfers	-0.2	-0.2	-0.4	-0.3	-0.5
Total	-1.9(1)	-2.0	-1.3	-1.8	-0.1

As a percentage of government expenditures

By level of government

Federal	-6.2	-6.9	-4.0	-6.2	-0.3
Provincial	-4.6	-5.5	-3.4	-4.8	-0.1

(1) The total amount of revenue forgone in 1976 amounted to \$3.6 billion.
Note: Numbers may not add due to rounding.

4. The Revenue-Expenditure Balance of Governments Related to the Retirement Income System. Table XII-8 brings together the results of Tables XII-6 and XII-7 so as to indicate the combined effect on government revenues and expenditures of changes in the demographic structure of the population under the existing retirement income system and under an enlarged, mandatory system. The table does not take account of effects on corporate tax revenues for reasons discussed in Footnote 17, or on Public Service pension and related borrowing costs discussed in Section 5.

Table XII-8

Estimated Net Effect on Balance of Government Revenues
and Expenditures Under the Present and Enlarged
Mandatory Retirement Income Systems, 1976-2031(1)

	Present System			Enlarged Mandatory System	
	<u>1976</u>	<u>2001</u>	<u>2031</u>	<u>2001</u>	<u>2031</u>
As a percentage of government expenditures					
Federal					
Expenditures	11.3	13.5	21.9	11.6	19.1
Net personal income tax revenues	<u>6.2</u>	<u>6.9</u>	<u>4.0</u>	<u>6.2</u>	<u>0.3</u>
Total	17.5	20.4	25.9	17.9	19.4
Provincial					
Expenditures	0.7	0.8	1.4	0.2	0.3
Net personal income tax revenues	<u>4.6</u>	<u>5.5</u>	<u>3.4</u>	<u>4.8</u>	<u>0.1</u>
Total	5.3	6.3	4.8	5.0	0.4
As a percentage of GNP					
Federal					
Expenditures	2.3	2.6	4.7	2.2	4.0
Net personal income tax revenues	<u>1.3</u>	<u>1.3</u>	<u>0.9</u>	<u>1.2</u>	<u>0.1</u>
Sub-total	3.6	3.9	5.6	3.3	4.1
Provincial					
Expenditures	0.1	0.1	0.2	0.0	0.0
Net personal income tax revenues	<u>0.7</u>	<u>0.7</u>	<u>0.5</u>	<u>0.6</u>	<u>0.0</u>
Sub-total	<u>0.8</u>	<u>0.8</u>	<u>0.7</u>	<u>0.6</u>	<u>0.0</u>
Total	4.4	4.7	6.3	4.0	4.1

(1) In addition to the figures on expenditures, those on net personal tax revenues show the drain on the Treasury as a result of taxes forgone, with the result that the balance of the two in all cases is negative.
Note: Numbers may not add due to rounding.

The table shows that changes in the demographic structure would have a significant impact on the combined revenue and expenditure positions of the federal government between 1976 and 2031 if the present retirement income system remained in place. As a proportion of total federal expenditures, the net combined revenue-expenditure costs is estimated to increase from 17.5 to 25.9%. As a proportion of GNP, the costs would rise from 3.6 to 5.6% over this period. During the same period, the table shows that changes in the demographic structure would reduce slightly the combined revenue and expenditure position of provincial governments.

Under the enlarged, mandatory system, however, the net combined revenue-expenditure effects on the federal government as a percentage of its total spending, and in relation to GNP, would increase much less than in the case where there is no expansion of mandatory plans; and the combined impact on provinces would be reduced further. For both levels of government together, the burden would decline fractionally in relation to GNP. This is because of the decline in expenditures on income-tested benefit payments and the increases in net personal income tax revenues arising from enlargement of the system. The costs of this enlargement would be borne directly by contributors to it, and not by governments; the increased costs of contributors are not shown in Table XII-8. They were dealt with in the first half of this chapter.

5. Governments as Employers. Although this report deals with the employer-sponsored pension system in general, the implications of the analysis also bear directly on the role of governments as employers. In line with this analysis, it follows that in the case of federal Public Service pensions, careful consideration should be given to updating deferred pensions by the rate of growth in average wages and salaries, and not the rate of growth in the Consumer Price Index. Such a change would help ensure that those with deferred pensions receive, relative to their pension contributions, benefits very roughly equal in value to the benefits that active employees receive. It follows also from the analysis in this report that consideration should be given to eliminating - for new employees - provisions under which those with long service are permitted to retire on an actuarially unreduced pension at an earlier age than those with shorter service. At present, members of the Public Service Superannuation Plan who retire before the normal pensionable age of 60 receive substantially larger benefits for their contributions than do those who retire in the age 60 to 65 range. On the basis of current experience, the added cost of the first change would be more than offset by the reduction from the second. But it is difficult to know how many of those currently cashing out of the plans would not have done so had there been an undertaking to maintain the value of deferred pensions relative to AWS. The greater the number, the greater the cost of the first change. It would be consistent with the conclusions reached elsewhere in this report that any net additional cost be financed by a reduction in the 2% unit benefit in the federal plans. In the case of many long-service employees, this rate of benefit now provides for more

consumption in the post-retirement period than in the pre-retirement period. In undertaking any changes, it would be important to phase them in a way that would not deprive plan members of already acquired rights.

The federal employee pension accounts are now credited each quarter with a rate of interest based on the rates earned by long-term federal bonds over the preceding 20 years. If, as suggested, it were decided to invest some portion of the pension contributions of federal employees through the market, the initial effect would be to increase government cash requirements; budgetary expenditures and the total debt would not change from what they otherwise would have been. If the rate of return on market securities exceeded the rate of return credited on the pension accounts, as might be expected over the long run, the cost of federal employee pensions could decline. This cost reduction would presumably accrue, at least in part, to the federal government as employer. On the other hand, if the market rate of interest for federal securities were to rise owing to the increased federal borrowings in the open market, the cost to government as borrower would tend to rise. The net result is uncertain, though such a process would at least result in a more realistic allocation of government expenditures between pension costs and costs of borrowing.

C. The Affordability of a Reformed Retirement Income System

The cost of the current retirement income system and that of alternative reforms to the system were considered as they affect contributors (Section A) and governments (Section B).

The estimates in Table XII-8 suggest that the net effect of an enlarged, mandatory system on the balance of revenues and expenditures would be to reduce significantly the costs that would otherwise have to be met by federal and provincial governments by 2031 under the existing retirement income system. In that year, government expenditures and revenue losses associated with the retirement income system would amount to an estimated 4.1% of GNP if the system were expanded. This compares with 6.3% if it were to remain unchanged. The actual net financial burden in 1976 was 4.4%. The main reason for this estimated reduction in government costs is that income-tested benefits would be reduced and tax revenues increased by larger mandatory pension plans.

For many of those already participating in employer-sponsored pension plans or otherwise saving for retirement, the establishment of an enlarged, mandatory system would involve little or, perhaps, no additional cost. Whether such a system is affordable, therefore, essentially comes down to the question of whether those who are not now participating in reasonably good employer-sponsored pensions, and not making significant private provision for retirement, should be obliged, with their employers, to make more substantial provision for their retirement years than they are now.

In the absence of an extension of mandatory pension arrangements, those now in the middle-income group who make no private provision for retirement will qualify for GIS and income-tested provincial programs to

supplement OAS and C/QPP benefits. This helps to account for the results shown in Table XII-8, which indicates that the financial burden of governments would be reduced under an enlarged, mandatory plan. Accordingly, an argument favouring an extension of mandatory arrangements is that the pension system should prevent middle-income earners (who can presumably afford to provide for themselves) from relying on such income-tested programs.

An enlarged, mandatory pension system also raises a concern that around half of the incremental costs would fall, at least initially, on employers. This applies particularly to employers who now have no pension plan, many of whom are in relatively small, labour intensive and highly competitive industries. One way of mitigating the cost impact on such employers would be to require all employers to contribute to the C/QPP on the basis of their total payroll rather than, as now, only on the earnings covered for pension purposes. In this way, capital intensive firms paying comparatively high wages and salaries would contribute relatively more and labour intensive firms paying lower wages and salaries would contribute relatively less.

Quite different considerations need to be taken into account in respect of low-income Canadians of working age, particularly if they are the sole or main earner in the family. As previously suggested, people in this group should be exempted from participation in an enlarged, mandatory earnings-related pension system, or their participation should be subsidized. The effect on costs of both the exemption approach, and the subsidy approach, have not been included in the data presented.

The final question that arises is whether the economy can sustain the added expenditures associated with a larger, mandatory pension system or, indeed, associated with the present system - given the major increases in the aged-dependency ratio which have been forecast. This question in turn has a number of dimensions. Is it appropriate for governments to require those in middle-income groups who make what might be regarded as inadequate preparation for retirement to forgo more consumption in their work years? Will an expansion of the pension system affect the level of saving and capital formation in the economy? How might it affect the allocation of investment? What will be the effects on cost competitiveness in Canadian industry?

Data developed earlier in the report demonstrated the prospective impact of demography on the future costs of the existing retirement income system. The data were based on demographic assumptions which, if anything, err on the side of exaggerating the effect on costs of the changing age structure of the population. This demographic base has also been adopted to project the cost of enlarging the system as it now exists.

Through the enlargement of the earnings-related portion of the pension system described earlier, people would be required to forgo during working years sufficient consumption to enable them to more or less maintain their living standards after retirement. Whether, in the

long run, the economy can sustain the additional costs is, in essence, a matter of whether the suggested lifetime consumption pattern would be found appropriate by most people and, if so, whether the resulting savings flows within the economy as a whole would be adequately maintained and productively employed.

This leads directly to a question about the economic impact of a larger pension system on the wealth of future generations. It is sometimes argued that when pensions promised to the current working generation are not fully funded, there is an adverse effect on the level of saving in the economy and, hence, on the level of capital formation. It is contended that this lower level of capital formation would result in lower economic output at the same time as the payout of pension benefits would rise. As indicated in Chapter IV and as the next chapter also suggests, however, there is no strong evidence to indicate that the level of capital formation is, in fact, significantly affected in this way - even though the possibility cannot be dismissed.

Whether or not the savings resulting from such an enlarged, mandatory system would be productively employed raises another question. The efficiency of the economy will obviously be impaired to the extent that pension funds are invested in less productive activities than the savings they displace. If it is accepted that financial markets provide the best mechanism available for the efficient allocation of savings, a strong case can be made for ensuring that all or a substantial part of additional funds generated by an enlarged pension system are allocated through the market.

A further important economic consideration that arises is the extent to which the international competitive position of Canadian companies might be adversely affected by the higher costs of an enlarged pension system. Since the impact would undoubtedly vary from one company to another, this question cannot be answered definitively. In this connection, it is noteworthy that the data in Chapter III comparing public pension benefits in Canada with those in other industrial countries showed that, for people with average earnings, the Canadian system was toward the lower end of the scale. A system of the dimensions envisaged in Options 3 or 4 would not exceed that already established, or in the course of being established, in a number of other major industrial countries. Cost impacts would be greatest in cases where there are currently no employer-sponsored pension plans, most commonly in small firms and in the service trades. A very small proportion of paid workers in community, business, and personal services and in trade are members of employer-sponsored pension plans. This is in contrast to mining, quarrying, oil production, transportation, communications and manufacturing, where a relatively high proportion are covered. The first group of industries is, in general, subject to less international competition than the second. Accordingly, the industries likely to be subject to the greater cost increases under Options 3 or 4 are those whose output is least directly related to export or import substitution markets. This is not to say, however, that measures adding to employer costs will not have some bearing on Canada's international competitive position.

D. Summary

1. Cost Impacts of The Existing System. The conclusion that emerges from the discussion in this chapter is that both contributors and governments face the prospect of significant increases in costs in future to maintain the existing retirement income system. These additional costs are the result mainly of the growing amounts of benefits payable under the OAS and C/QPP.

In 1976, the actual cost of all the major public and private programs was equivalent to 11.8% of total earnings in the economy - about \$13 billion. It was estimated that the current service cost of the present system on a mature basis would increase over time from this 11.8% figure to something less than 14.9% of total earnings - around two to three percentage points.

The rising costs foreseen for the present retirement income system will fall mainly on the contributors to the earnings-related programs, who are the principal beneficiaries of the system, and to a lesser extent, on taxpayers in general, because of anticipated increases in the OAS due to the growing numbers of elderly.

Setting aside the C/QPP as entities which are financed separately from general government, it is estimated that the net expenditure effects (revenue and expenditure) of the existing retirement income system on the federal and provincial governments together will rise from 4.4% of GNP in 1976 to 6.3% in 2031.

The future impact of the present retirement income system on expenditures of the government sector as a whole, including the C/QPP, may also be projected. It is estimated that benefits under public pension programs will rise from 3% of GNP in 1976 to 10.1% in 2031. This increase will be partially offset by a decline in outlays on other existing programs which are related to age, with the result that the proportion of GNP absorbed for all purposes by the government sector (including the C/QPP) is estimated to rise from 40.2% in 1976 to 44.8% in 2031.

2. Cost Impacts of the Enlarged System. The introduction of an enlarged mandatory program, if this took the form of an extension of public programs, was estimated to further increase the total cost of all public programs by 3.7 percentage points, from 9.2 to 12.9% of earnings after some offsetting reductions in the cost of income-tested programs. If the enlargement of these programs did not displace any of the contributions to RRSPs and RPPs, funds flowing to retirement income arrangements would be equal to some 18.6% of earnings - more than 50% above current outlays of 11.8%. If the displacement were at the level indicated in Line 6 of Table XII-2, it is estimated that the total cost of all of the major elements of an enlarged retirement income system would amount to 15.2% of total earnings. This would represent an increase over the estimated full cost of the present system on a mature basis of something under 14.9%, but the magnitude of the increase is uncertain. The costs of an enlarged mandatory system that relied on employer-sponsored pension plans (Option 3) would be comparable.

These higher costs of an enlarged system would have their greatest impact on contributors as such, and the impacts would vary widely. The increase in costs, reflecting both the future costs of the present system and the enlargement, would range between zero and ten percentage points of the employee's earnings, depending upon his earnings level and his present provision for retirement. These increases would be shared between the employee and his employer. The largest increases would be for those who are not now members of employer-sponsored pension plans and not otherwise making financial provision for their retirement. Under an expanded system, it would be necessary to devise some means of alleviating the impact on low-income workers.

The cost to governments in terms of the balance of revenue and expenditures would be reduced as a result of the introduction of an enlarged mandatory system. Whereas under the existing system it is estimated that those costs as a proportion of GNP would rise from 4.4% in 1976 to 6.3% in 2031, the indication is that the balance would actually decline to around 4.1% at the end of the period under an enlarged system.

CHAPTER XIII

FINANCING PENSIONS: SOME POLICY ISSUES

A. Introduction

This chapter is concerned with some policy issues relating to the financing of the retirement income system.

It was seen in Chapter IV that pension promises are likely to reduce the amount of personal saving, since a person who expects to receive a pension is likely to save less on his own for retirement than one who does not expect a pension. The direct or 'first round' effect on aggregate saving, then, depends on the amount of this reduction, and on the amount of saving associated with the pension plan, since funding offsets - to one degree or another - the reduction in personal saving.

The effect of pension arrangements on saving is closely bound up with the notion of intergenerational equity. It would not be fair if one generation chose to increase its consumption significantly and, as a result of a lack of savings, failed to pass on an adequate amount of capital stock to the next generation, especially if that first generation also tried to impose on the next a significantly enlarged set of pension obligations. These concerns arise mainly in relation to public pension programs and, to a lesser extent, public employer-sponsored plans. In the absence of funding, first round effects of these types of pension arrangements on personal saving may be assumed to be negative. However, in the context of intergenerational equity - at least as seen from an economic perspective - first round effects are not paramount. What is paramount is the amount and quality of capital stock that is passed on from one generation to the next; on this point, the theoretical literature is ambiguous and the empirical data are inconclusive. The conclusion set out in Chapter IV was that the effect of a pension promise on the capital stock is uncertain; and although the absence of funding may be presumed to exert some downward effect on the size of the capital stock, any such effect has not likely been large in relative terms.

As for the financing of employer-sponsored plans, emphasis was also placed in Chapter IV on the uncertainty attached to rates of investment return. This, in turn, raises questions about the valuation of pension assets and liabilities, the practices followed for amortizing deficiencies, and the cost volatility which stems from them.

With these sets of concerns in mind, the discussion turns to the following policy considerations:

- the tax bases of the plans making up the public pension system;
- financing arrangements for the public system, and Canada/Quebec Pension Plans (C/QPP) contribution rates;
- possible use of the capital markets in allocating CPP funds; and
- funding of employer-sponsored plans within the public and private sectors.

B. Financing the Public System

1. The Tax Bases of the Public Pension Programs. The Old Age Security (OAS) and Guaranteed Income Supplement (GIS) programs are financed out of general tax revenues. The C/QPP are financed by an earmarked payroll tax. The reasons for the differences are of some interest.

The C/QPP, as they took shape, appeared to be a response to the gaps in the coverage of the employer-sponsored pension system and to problems of portability found within it. Their essential role was to help people allocate their lifetime consumption between their working and retirement years in a pattern that would generally be considered appropriate. There is no evidence to suggest that this perception of the role of the C/QPP has changed.

The C/QPP are open only to those with earnings from employment, including self-employment. Benefits and contributions are related to earnings (up to a certain level). That both benefits and contributions are linked to earnings is natural, since, as noted above, the C/QPP are substitutes for private arrangements that are normally earnings-related. Financing the C/QPP from general revenues would weaken the link between benefits and contributions.

The C/QPP are destined to develop into large programs, whether or not benefit levels are raised at some time in the future. If possible expansion of benefit levels in these programs is accompanied by parallel consideration of increases in contribution rates, the chances of benefits being raised, without adequate care, would be reduced.(1)

(1) There is, of course, no assurance that such a constraint would be indefinitely maintained. In the past, a number of other major government programs, including the OAS, provided for a specific levy when they were first initiated for the purpose of linking costs and benefits in the mind of the public. That link was subsequently broken when the earmarked taxes were abolished and the programs instead financed out of general government revenues.

The OAS, although it has some of the characteristics of the C/QPP, also has an important redistributive role, and the GIS is concerned wholly with redistribution. The OAS/GIS system provides an income guarantee to those over 65, with the highest benefit levels accruing to those with the lowest incomes. It involves an intergenerational transfer of income from the working generation to the elderly. Financing it out of current general revenues thus seems entirely appropriate.

2. Financing the Public System. Whatever the base of the financing system, a question arises as to whether the benefits should be financed as they are paid, or whether they should be paid for as they are earned through the accumulation of a fund. The OAS/GIS are financed on a pay-as-you-go basis - that is, there is no reserve fund. On the other hand, C/QPP contribution rates have been higher than necessary to meet current benefit levels, and so have led in each case to the creation of a fund. If contribution rates are not increased, it is estimated that both of these funds will be exhausted around the turn of the century, with the likelihood that the plans will be financed thereafter on a pay-as-you-go basis.

Pay-as-you-go financing requires that current revenues be large enough to cover current benefit payments only. However, funding involves the accumulation of a pool of assets. When the accumulation is large enough to meet fully the estimated future cost of accrued liabilities, full funding has been achieved. The advantages and disadvantages of the two financing methods have been much argued.(2)

Under pay-as-you-go financing, the amount available to pay benefits grows at virtually the same rate as the base on which the taxes or contributions are levied so long as the tax or contribution rate remains unchanged. If the earnings base increases annually by 5%, for example, the inflow of funds to pay benefits can be expected to grow at approximately the same rate. If the rate of growth of the earnings base is greater than the rate of return on investment under a funded plan - other things being equal - the same pension will require, at that point in time, a lower tax or contribution rate if it is financed on a pay-as-you-go basis rather than a funded basis, and vice versa.(3) If, for

(2)It should be recalled that a degree of funding became in fact a sine qua non for the 1964 agreement between the federal and provincial governments on which the C/QPP were founded.

(3)Although these observations have been expressed in terms of the rates of return to contributors, they can be extended to the economy, if the notion of social rates of return is introduced. The point is not pursued here because measurement of the social rates of return on the variety of uses to which public pension funds have been applied is fraught with difficulty, and because economic growth is the outcome of other factors besides pension funding.

example, the earnings base grows by 5% a year, the total amount of contributions received will also grow by a similar amount. But if a funded plan earns only a 4% rate of return at a time when the earnings base for pension purposes is increasing at the rate of 5% per annum, then a higher rate is required than under pay-as-you-go financing to cover the cost of the benefits being earned. But other things are, of course, not equal. The ratio of elderly to the labour force is rising. In the absence of such developments as unusually large productivity increases for very long periods of time, pay-as-you-go financing will require higher tax or contribution rates in the more distant future, whereas funding would tend to stabilize such rates over time.

It may be helpful at this juncture to list some of the points which have been advanced in favour of and against funding of public pension plans. Not all the points are necessarily valid or of equal weight. They simply indicate the range of arguments that are frequently put forward.

a) The Case for Funding. The arguments in favour of funding generally go as follows:

- funding promotes intergenerational equity, inasmuch as each working generation is called upon to forgo consumption equivalent to the estimated value of the pensions it has promised itself. From a financial perspective, a separate fund exists to pay the benefits, so that future generations will not be required to meet any part of the cost of paying pensions to earlier generations. Economically, the fund helps to ensure that no decline in the rate of saving per worker - and hence in the accumulation of capital stock per worker - occurs because of the promises of the pension system. Incomes of future generations will be what they would have been regardless of the pension promise to the current generation;
- since a significant part of the retirement income system - OAS, GIS, provincial supplements, favourable tax treatment for the elderly - is financed by intergenerational transfers, the other parts - C/QPP and employer-sponsored plans - should be funded all the more fully;
- full funding would eliminate the regressivity associated with the C/QPP contribution rates now in effect, under which current high-income earners receive a larger wealth transfer from the next generation of workers than do low-income earners. (This is apart, of course, from the continuing regressivity arising from deductibility of pension contributions from taxable income.);
- funding leads to relatively stable contribution or tax rates since each cohort 'pays its own way'. In contrast, changes in pay-as-you-go rates, which vary with changes in the proportion of workers to the elderly, are likely to be unfair between generations;
- funding increases the likelihood that the social contract implied in promises of pension benefits will be met. The

existence of earmarked funds, and the knowledge that the prior generations clearly set aside savings to ensure the availability of pensions upon retirement, significantly lessen the possibility that future generations will choose to change the law and abrogate the commitments;

- funding provides capital accumulations needed to finance the large capital-intensive energy and resource projects of the next few decades, in addition to other investment; and
- savings in excess of domestic requirements, which may be generated by funding, can be used to acquire foreign securities or to repatriate foreign-owned Canadian securities. In either case they add to Canadian wealth, and in the latter they may also reduce the degree of foreign control in the Canadian economy.

b) The Case Against Funding. The arguments against funding generally include these points:

- a pension system is, to a significant extent, merely a substitute for transfers which occur within the family. Therefore, it is not surprising that reductions in personal saving due to the promise of future benefits are difficult to document, and the consequent need to offset them by funding is largely imaginary. Personal saving is largely unaffected;
- although large funds may easily be accumulated through the funding of pension obligations, saving on such a scale and in such a form may not always be appropriate. Indeed, by restraining consumption at a time when demand is weak, the effect may well be to slow economic growth and, hence, investment;
- investment by the private sector is determined primarily by profit opportunities. The availability of pension funds does not itself ensure a growing capital stock;
- if society wishes to increase saving - whether by incentive or compulsion - considerations of social equity suggest that the basis for deferring consumption should be more selective and progressive than would be appropriate for pension financing;
- the existence of a large fund, despite the fact that it is earmarked for the payment of accrued future benefits, encourages demands for increased benefits. (Given continuance of a plan that is fully funded, the size of the fund would be reduced significantly only in the case of a sharp drop in population.);
- the existence of a large fund poses almost intractable investment problems. If channelled through the capital markets, a large fund may introduce a concentration of financial power that is

undesirable; indeed, it may strain the absorptive capacity of the market. On the other hand, if made available to governments, it constitutes captive financing which is likely to produce less than optimal resource allocation;

- no country has fully funded its public pension programs. More than one hundred other countries have old age insurance plans. A majority of them are financed by contributions collected through a payroll tax under a virtual pay-as-you-go system. The size of the fund under these old age insurance programs is usually only a few times the monthly benefit expenditure;
- moving to a fully funded position would likely be inappropriate from the point of view of stabilization policy when the economy is operating seriously below capacity, and would probably have adverse consequences in the short run for Canada's international competitive position;
- funding will not ensure intergenerational equity. There is no assurance, especially if the funds are captive to governments, that the stock of capital will be increased commensurately. Rather, it may be diverted by governments to finance current consumption; and
- intergenerational equity cannot be established simply by funding pension plans, but can make sense only in the much wider perspective of the total legacy passing from one generation to another. Against the burden of debt must be placed the stock of productive capital investment. Changes in the physical environment and in the usable stock of non-renewable resources must also be taken into account, as well perhaps as such intangibles as intellectual and artistic capital. To focus on the pension system alone is myopic. The relevant question is whether the succeeding generation is going to be better or worse off than its predecessors. In this sense, there is little evidence of a lack of intergenerational equity, and little justification exists on these grounds for the funding of public pensions.

c) A Basis for Policy with Respect to Financing the C/QPP. Among the factors listed above, the effect of pension financing arrangements on the size of the capital stock and, hence, on intergenerational equity, is probably the single most important. Although, in the final analysis, intergenerational equity can be best assessed in the overall perspective of how successive generations fare as a result of the decisions of their

forebears and descendants, it nevertheless seems desirable to seek to achieve fairness, as far as possible, within programs that are as large as the C/QPP.(4)

At first glance, this objective would seem to favour a policy of much greater funding of these plans, given the presumption that pay-as-you-go arrangements may exercise a downward impact on the size of the future capital stock. However, there are other considerations that militate against such a policy. For one thing, full funding implies that an extraordinarily high proportion of national saving would flow through governments. This opens up the possibility that the financing of the public sector would be greatly facilitated to the detriment of the private sector. In any event, it would clearly involve major adjustments to the operations of the capital markets and their allocative process. The magnitudes involved, as will be seen later, are enormous and the consequences of changes of this kind are not at all predictable. Therefore, the case for increasing the CPP fund relative to the level of liabilities must be approached with some caution.

A second factor that might influence the financing decision is the desire to reduce fluctuations in C/QPP contribution rates. Pay-as-you-go rates vary with changes in the age structure of the population. In the long run, a measure of funding can reduce the upward and downward movements in these rates. This second factor is of some consequence in view of the anticipated growth in the ratio of elderly to those of working age. These last two factors, taken together, support a financing policy that provides a modest degree of funding.(5)

(4)The report returns later to the important question of how best to ensure that pension fund saving results in productive additions to the capital stock.

(5)It may be noted that the discussion to this point has included no reference to provincial finances as a factor in determining appropriate CPP financing arrangements. Instead, the discussion has been aimed at identifying the factors that might govern a decision on CPP financing independently of considerations relating to provincial finances. In fact, of course, past decisions on CPP financing have been affected by provincial government views with respect to their financing needs. In this regard, some time ago, the Continuing Committee of Ministers of Finance and Provincial Treasurers authorized their officials to begin a review of the C/QPP financing arrangements. The sections which follow are not intended to prejudge the conclusions of the federal-provincial review, nor to serve as a definitive statement on the matter of financing, but rather to suggest some possible approaches that may be useful to policy-makers in this area.

3. The Contribution Rate for the Present C/QPP. This section contains estimates of the C/QPP contribution rate which would be required under pay-as-you-go financing arrangements, and examines rate structures which might be appropriate if a degree of funding, as suggested above, were maintained.(6)

a) Pay-as-you-go Rates. The demographic assumptions used generally in this report are based on one of a range of Statistics Canada projections, specifically the projection based on the assumption of a fertility rate of 1.8% and net annual immigration of 100,000 (as described in Appendix 9). Under these assumptions, the pay-as-you-go contribution rates required for the present CPP would be as shown in Column A in Table XIII-1. To illustrate the sensitivity of pay-as-you-go rates to the demographic assumptions, Column B of the table shows contributions required for a fertility rate of 2.2% (equivalent to net replacement of the population) with net annual immigration of about 112,500 in 1975, increasing at a compound rate of 1.5% per annum until the year 2000 and at a compound rate of 1% thereafter.

The table indicates that if the C/QPP had been financed on a pay-as-you-go basis in 1976, the contribution rate required to cover the cost of benefit payments in that year would have been an estimated 2% of earnings subject to contribution. This compares with the actual rate of 3.6% of such earnings, which clearly provided for some funding of accruing liabilities. The required contribution rate would climb to a peak by 2031 under either set of demographic assumptions, but would amount to 11% in case A and 8.6% in case B.

(6) These rates were derived before introduction into the CPP model of updated algorithms in preparation for the CPP statutory Actuarial Report No. 6. Use of the revised model would not alter significantly the illustrative data employed in this report.

Table XIII-1

Estimated Contribution Rate on Earnings Subject to Contribution Required to Finance the Present C/QPP on a Pay-as-you-go Basis(1)

Year	<u>Demographic Assumptions</u> (see text)	
	A	B
	(%)	
1976	2.0	2.0
1981	3.2	3.2
1991	5.0	4.8
2001	6.2	5.8
2011	7.0	6.2
2021	9.2	7.6
2031	11.0	8.6
2041	10.4	8.0
2050	10.2	8.0

(1) It is estimated that the rates shown for 2001 onward would be increased by between 70 and 90% if C/QPP benefits were increased from 25 to 45% of average lifetime earnings, and maximum pensionable earnings covered by the plans were increased from the average to 1.5 times the average of wages and salaries (AWS). This assumes that such enrichment would have been phased in by the turn of the century. Earlier rates would also be affected by the phase-in arrangements adopted.

b) Rates Providing for a Measure of Funding. This section seeks to determine what ultimate long-term contribution rate might be appropriate for the present C/QPP, based on the assumption that it is desirable to reduce contribution rate fluctuations caused by demographic factors and to enhance intergenerational equity within the C/QPP. This implies a measure of funding.

If intergenerational equity within the C/QPP were an overriding objective, it might be regarded as necessary to establish C/QPP contribution rates for each age group newly entering the labour force sufficient to cover the estimated total cost of the benefits which would ultimately be received by that group. This so-called 'full cost contribution rate' is shown in Table XIII-2, based on two different assumptions about the inflation-adjusted rate of investment return. (It should be noted that the fund built up with such a full cost contribution rate would not be sufficient to cover all the liabilities which would have been incurred prior to the adoption of that rate because the present contribution rate of 3.6% of earnings subject to contribution is not high enough to cover the liabilities already accruing under the plans.) Table XIII-2 shows that to cover the full cost of benefits to age groups newly entering the labour force, the contribution rate would have to range between an estimated 7 and 10.6% of earnings subject to contribution, based on the stated assumptions.

Table XIII-2

Full Cost Contribution Rates
for New Entrants to the Present C/QPP(1)

	Inflation-Adjusted Rate of Return	
	3.5%	2%
Contribution rate(2)	7%	10.6%

(1) Assuming annual increases of 3% for prices and 5% for wages and salaries.

(2) These rates cover the full cost of the C/QPP for new entrants only.

The economic assumptions underlying the 7% contribution rate shown in the table imply a 3.5% inflation-adjusted rate of investment return. Empirical data suggest that this is an appropriate long-term rate for a mixed portfolio of securities that would include a substantial proportion of equities and mortgages, as well as bonds. The 10.6% rate assumes a 2% inflation-adjusted rate of return, which appears not to be unreasonable in the very long run for investments in Government of Canada bonds with a long term to maturity. From the perspective of the CPP contributor, the lower contribution rate associated with the higher rate of return suggests that as much as possible of the CPP portfolio should be invested in classes of securities that have traditionally been among those with higher rates of return. Inflation-adjusted rates of return are discussed in greater detail in Appendix 10.

Even though the full cost contribution rates shown in Table XIII-2 would not provide sufficient funds to cover outstanding liabilities, if implemented immediately they would lead to the accumulation of a very large fund, giving rise to the concern expressed earlier that they would either facilitate public sector growth to the detriment of private sector growth or require very large adjustments in the capital markets. Moreover, such an increase in contribution rates from the present level would also be of concern in terms of intergenerational equity for reasons discussed immediately below.

Within the retirement income system, cohorts currently in the labour force are paying through taxation for income-tested programs that provide assistance to the current elderly (GIS, Spouse's Allowance (SPA), and provincial supplements). These income-tested programs were introduced at about the same time as the C/QPP. In the absence of changes in their statutory provisions, they will contract as C/QPP benefits rise. Under these circumstances, they will not be required on their current scale by the time new entrants to the labour force become elderly.

In order to take this into consideration, a series of notionally 'equitable' CPP contribution rates has been estimated. The sum of the notionally equitable CPP contributions, as designed, and the taxes being paid at the time to provide income-tested benefits for the current elderly, is equal to the value of the future CPP and income-tested benefits that contributors can expect to receive in retirement.(7) The evolution of these notionally equitable CPP contribution rates is shown in Table XIII-3. The table indicates the rates that would apply, at five-year intervals (up to 1996). The table also indicates the size of the CPP fund in 1976 dollars, and the fund's estimated relationship to the nation's net capital stock (excluding housing), under two different rate of return assumptions. It will be noted that under the assumption of an inflation-adjusted rate of return of 2%, the required contribution rate is significantly higher than that assuming an inflation-adjusted rate of return of 3 1/2% and, consequently, the size of the fund is also very much larger.

(7) In 1976, the cost of GIS, SPA and provincial supplements was equivalent to approximately 2.2% of the total earnings base covered by the C/QPP. The current contribution rate for the C/QPP is 3.6% of covered earnings. It is estimated that toward the end of the century the cost of the income-tested programs will have declined to about 0.2% of the C/QPP earnings base, as compared to the 1976 level of 2.2%. If rates that covered the full cost of new entrants into the labour force had been adopted in 1976, it might have been considered appropriate and equitable to make an allowance for this two percentage point difference between the current cost for income-tested programs and that expected in the future. This 'credit' would decline in future years with the actual cost of such programs and the 'equitable' full cost rate of the C/QPP would rise commensurately. (If GIS benefits increase in line with AWS, the equitable CPP rates in Table XIII-3 will show a more rapid rise to their final level, and the future size of the program will be larger than assumed here.) Note that the calculations make no allowance for the fact that the cost of programs financed through general tax revenues is borne differently than the cost of the C/QPP.

Table XIII-3

Notionally Equitable CPP Contribution Rates
and the Size of the Resultant Funds(1)

Inflation-Adjusted Rates of Return of:

Year	3.5%			2%		
	CPP Rate %	1976 \$ billion	As % of Estimated Net Capital Stock(2)	CPP Rate %	1976 \$ billion	As % of Estimated Net Capital Stock(2)
1976(3)	3.6	11	3	3.6	11	3
1981	5.8	17	4	9.6	19	4
1986	6.4	30	6	10.0	46	9
1991	6.6	46	7	10.4	79	12
1996	7.0	62	8	10.6	116	16
2025	7.0	139	10	10.6	398	27
2050	7.0	-53(4)	n.a.	10.6	646	n.a.

- (1)The long-run economic assumptions are a price increase of 3% and a real increase in wages and salaries of 2% annually.
- (2)The net capital stock is the estimated value of the future economic life of building and engineering construction and of machinery and equipment. The data exclude the stock of housing. Projections assume that the ratio of net capital stock to Gross National Expenditure remains as in mid-1976. The basic data were derived from Fixed Capital Flows and Stocks, 1973-1977, Statistics Canada.
- (3)Actual.
- (4)This negative balance arises because of the absence of full funding of the benefits accruing in respect of contributors who entered the plan before 1996 and because of the accumulation of interest on this unfunded liability. A similar negative balance does not occur in 2050 on the right hand of the table in part because of the lower interest rate assumed there.

Table XIII-3 shows that by 2025, the CPP fund balance would be equal to about 10% of the net stock of fixed capital in one case and 27% in the other. This indicates the very substantial effect this measure of funding could have. If housing were included, these percentages would be substantially lower.

4. Allocating CPP Funds through Capital Markets. This section discusses the possibility of allocating through capital markets some, or all, of the funds which would be generated by the CPP if full or partial funding were adopted. Four methods are identified under which funds flowing to the CPP could be channelled to the markets. Two scenarios are then developed for differing proportions of funds directed in this way.

Intergenerational equity, within the context of the CPP and the related income-tested programs, might appear to be served by the contribution rates along the lines of those derived in the preceding section. But, in fact, this would be the case only to the extent that the funds generated by the plans were used wholly to add to the capital stock, rather than to finance consumption.

Allocation of CPP funds outside of the market, and at less than market rates of interest, clearly facilitates the financing of provincial government expenditure; and it does so on a basis which has lower visibility than taxation or market borrowing.(8) With money available at an attractive interest rate and without competition from other borrowers, it is difficult to have confidence that the resulting allocation of resources will be optimal. Questions of allocation and use become critical when funds as large as those contemplated in the preceding section are envisaged.

The fiscal activities of the public sector are least likely to be influenced by special access to pension funds, and the pension funds themselves are most likely to be allocated optimally when such funds are invested at arm's length through the market, as is the case with pension funds in the private sector. To the extent that this procedure were followed, provincial governments would compete for funds with other borrowers. As already indicated, investment through the market of funds

(8) Coupon rates on CPP issues are lower than on contemporary market issues of the borrowing province, and the latter might be even higher if full financing were sought in the market. CPP funds invested in this way also avoid normal issue costs.

generated by the CPP would also benefit participants in the plan by improving its long-run rate of return. Unwarranted transfers between contributors to the pension plan and taxpayers that result from concessional rates of interest would be eliminated⁽⁹⁾, and the allocation of government costs between pensions and borrowing would more clearly reflect the realities of the marketplace.

Four methods by which funds flowing to the CPP could be invested in market securities are identified:

- provinces individually could invest through the market some portion of the funds they receive. This simple method has the advantage of requiring no change in the manner in which CPP funds are now allocated to the provinces by the federal government. But it would not achieve arm's length investment, since provinces would retain control over investment activities. Nor would it necessarily yield higher rates of return to the CPP since, if the yield obtained by provinces were higher than that paid under present arrangements to the CPP, as is likely, provinces might retain the excess. Any benefit would then accrue to provincial taxpayers, rather than to CPP contributors;
- the CPP could purchase securities on the open market.⁽¹⁰⁾ This alternative could achieve the objectives of arm's length investment, if decisions were made wholly on the basis of market considerations. However, the CPP fund could - depending upon its size - become the dominant force in certain segments of capital markets, and its trading decisions with respect to specific securities would have the potential to disrupt the market. Moreover, should there be departures from purely market considerations because, for example, provinces required that investments be distributed among them in the same proportion as CPP contributions, contributors would have no assurance that their funds were being invested in a way that would produce the best rate of return. Indeed, any constraints on investment, other than those required for solvency purposes, would tend to lead to a less than optimal allocation of resources. But it is not clear how the degree of potential misallocation would compare with that likely resulting from the present CPP practice of direct lending to provinces at less than market rates;

(9) While these may be largely the same persons, there may be important implications for income distribution, because of the differing incidence of CPP contributions and of the tax system generally.

(10) This is the practice of the QPP.

- CPP funds for market investment could be placed by negotiation, tender, or formula, with existing financial institutions (such as trust companies, banks and other deposit-accepting institutions, and life insurance companies) to avoid the creation of a single large investment fund. While this might be less disruptive to securities markets, the CPP would be capable of dominating many of the institutions, even if its assets were distributed among them. There would be the potential for disrupting the financial system if, by virtue of the CPP's influence, an increasing proportion of investment and allocative decisions were made on other than market criteria; or
- the CPP could create a number of funds (or a central fund comprising a number of managed funds operating independently of each other).(11) This might resolve some of the problems arising from a large central fund and could lead to useful comparisons of investment performance.

These methods are not necessarily mutually exclusive and the most effective arrangement might well be a combination of the last two described.(12)

The estimated effect of such recycling arrangements on provinces and on the capital markets is examined by postulating a CPP fund for the 1976-2025 period based on the equitable contribution rates and assumption of a 3.5% inflation-adjusted rate of return shown in Table XIII-3. In Table XIII-4, the projected size of the fund is shown in 1976 dollars and estimated current dollars for the given years. The allocation of funds are those accumulated on a current dollar basis. Two scenarios were developed for dividing access to the funds between the provinces on the one hand and the capital markets on the other. The scenarios are described after the table.

(11)A variant of this arrangement was chosen by Sweden in respect of its National Supplementary Pension Scheme. Three separate boards were appointed from different sectors of the economy and from different groups within those sectors, with freedom to invest in virtually all bonds and debentures, in promissory notes of governments and of mortgage institutions, and in loans to employers arranged through financial institutions. The system does not appear to have encountered operating difficulties, although non-market criteria may play some part in the decision-making process. The board for the central and local authorities has invested a larger proportion of its funds in the public sector than have the boards for the private sector. (A fourth board was created to invest solely in equities on a pooled basis for the account of the other funds.)

(12)It might be added that the 'contracting-out' arrangement described as Option 4A in Chapter X may also be regarded as a recycling mechanism. Under Option 4A, many employers, especially the larger ones, would likely contract out, with the result that the assets associated with their plans would be under private control.

Table XIII-4

Estimated Amounts in Billions of Dollars Available for CPP Direct Lending to Provinces and for Market Investment under Two Scenarios

Year End			Scenario 1		Scenario 2	
	CPP Fund		Direct to Provinces	Through Market	Direct to Provinces	Through Market
	1976\$	current\$				
				(current \$)		
1976	11	11	11	-	11	
1981	17	20	20	-	20	-
1986	30	42	22	20	27	15
1991	46	74	22	52	38	36
1996	62	116	22	94	53	63
2001	79	173	22	151	73	100
2011	118	347	22	325	137	210
2021	143	562	22	540	257	305
2025(1)	139	616	22	594	330	286
2025(2)(398)	(1,766)		(22)	(1,744)	(191)	(1,575)

- (1) If the total fund of the present CPP, under the 'equitable' contribution rates proposed, earned an inflation-adjusted rate of return of 3 1/2%, it would be equivalent in 2025 to about: 121% of the Canadian dollar assets of chartered banks and of near-banks; or 142% of the Canadian dollar assets of life insurance companies; or 152% of the Canadian dollar assets of trustee pension plans; or 20% of the total Canadian dollar assets for these particular financial intermediaries, assuming in all cases that their growth had paralleled GNE. It would be equivalent in 2025 to about 17% of all outstanding Canadian bonds and stocks if the growth of these instruments paralleled GNE.
- (2) Table XIII-4 is based on the CPP fund shown in the left hand block of Table XIII-3 which was premised on an inflation-adjusted rate of return of 3 1/2%. With rates of return of 2%, rather than 3 1/2%, data for 2025 would be as shown in brackets on the bottom line. Because of the lower rates of return in this case, contribution rates must be higher and the fund must be larger. Under Scenario 2, with an inflation-adjusted rate of return of 2%, the funds estimated to be allocated directly to provinces would also be smaller (\$191 million in 2025) than if the rate of return had been 3 1/2% (\$330 million), since the advances necessary to finance interest on provincial borrowings would be smaller. A 45% CPP, with the Year's Maximum Pensionable Earnings (YMPE) set at 1.5 times AWS, as provided for in Option 4, phased-in over ten years, would lead at times, under a comparable structure of notionally equitable contribution rates, to funds more than twice as large as those shown.

Under Scenario 1, the provinces would continue to borrow directly from the CPP the funds that would be available until benefit payments and administrative expenses became equal to contributions based on the current contribution rate of 3.6%. It was estimated that this would occur in 1983. In that year, the net amount of funds available for lending to the provinces, after payment of benefits and administrative expenses, would equal the amount of interest payable by them to the CPP on outstanding loans. Under this scenario, the provinces would not be required to repay principal, but they would be required to pay interest on outstanding loans each year. The amount of funds held by the CPP would continue to grow, however, as a result both of the interest payments and of the increases in contribution rates that have been postulated. These additional funds would all be invested through financial markets (and some, of course, might be invested in the publicly-issued securities of provincial governments). Table XIII-4 shows that under Scenario 1, investment through the capital markets would reach an estimated \$594 million in 2025, about 27 times the \$22 million invested directly in provincial securities at that time.

Under Scenario 2, the same situation would prevail up to 1983 as that described under the first scenario. But in order to avoid any reverse cash flow from the provinces to the CPP following 1983, the interest payable by the provinces on outstanding CPP loans would be added to their debt. This would result, in effect, in a continuing increase in direct borrowings by the provinces from the CPP fund.⁽¹³⁾ The remaining funds available, however, would be invested through the capital markets. Under this scenario, over the period illustrated, the cumulative amounts invested through financial markets and the amounts loaned directly to the provinces would be roughly similar in magnitude.

To illustrate the possible impact of both scenarios on capital markets, the funds to be distributed in this way were assumed to be allocated in the same proportions as the assets of private trustee pension plans. The effects on markets for the debt of provinces and local governments, and for corporate bonds and equities, are outlined in Appendix 17. Under Scenario 1, the CPP's role as a supplier of funds to the provinces would be significant for another decade, but would then diminish greatly. Under Scenario 2, the CPP would remain a significant, although not a dominant lender for provincial/local bonds, meeting 15% or more of their borrowing needs.

(13) It may be noted, incidentally, that under Scenario 2, direct lending to provinces by the early 2020s would exceed the growth in the fund (receipts of contributions and interest, less payments of benefits and administrative expenses), requiring a withdrawal of funds invested through the market. The \$54 billion growth of the CPP fund from \$562 billion in 2021 to \$616 billion in 2025 would be less than the amount of \$73 billion represented by direct borrowings by the provinces to cover interest. Withdrawals of funds invested through the market would accelerate rapidly thereafter. In fact, the loans to provinces under Scenario 2 are a logical absurdity - an 'investment' on which the investor receives payment of neither interest nor principal in perpetuity.

Based on the admittedly static assumptions underlying the preceding discussion, CPP funds under either scenario would become a major element in the market for corporate securities. Indeed, under both scenarios, CPP funds would seem destined to overwhelm equity markets for a period of 30 to 40 years, providing amounts as high as 45 and 70% of net new issues, depending on the scenario.

In reality, however, it is likely that smaller amounts of CPP funds would be invested in corporate securities and larger amounts in provincial and local government securities than the static analysis suggests. (Indeed, it could well be that the distribution of the portfolios of private trustee pension plans which were used for the analysis would have included a heavier weighting of provincial and local securities if the CPP had not been in existence.) The direction of a greater proportion of CPP funds to government securities would reduce considerably the magnitude of the potential market problems noted earlier. Moreover, although this analysis has presupposed that there would be no increase in capital markets relative to Gross National Product (GNP), a greater supply of investment financing could lead to an expansion of the capital markets.

Nonetheless, limits to the scale on which CPP funds may effectively be invested through the capital markets do constitute an important reason to avoid the immediate levy of the notionally 'equitable' C/QPP contribution rates. (Of course, full funding would produce a much larger accumulation of funds for investment by the CPP than that generated under the assumptions about contribution rates adopted for purposes of this analysis.)

5. Choosing a CPP Contribution Rate. The discussion of this point has provided an estimated full cost contribution rate for the C/QPP of 7% of earnings subject to contribution. It has also been suggested that the move from the current 3.6% rate to 7% should be rapid enough to maintain a substantial level of funding, but that intergenerational equity does not itself require an immediate move to full cost rates. The discussion has indicated that raising the contribution rates from 3.6 to 7% on a step-by-step basis, as outlined in Table XIII-3 - via the notionally equitable path - would generate a very large fund beginning in the 1990s and that investing a fund of the indicated size through capital markets might overwhelm some sectors of these markets.

Columns (1) and (3) of Table XIII-5 include some information already set out in Table XIII-3. They show notionally equitable rates, and the size of funds associated with notionally equitable contribution rates, on two different interest rate assumptions. Columns (2) and (4) of Table XIII-5 show the impact of moving from the 3.6% rate to the 7%, on the basis of a slower phase-in. The sole purpose of the slower (i.e. longer) phase-in is to keep the fund size at a more moderate level.

Table XIII-5

Contribution Rates for Present CPP with Notionally Equitable Rates and with Alternative Longer Phase-In and Resulting Fund Accumulation(1)

Contribution Rate(2)	Inflation-Adjusted Rate of Return on Investment			
	3.5%		2%	
	(1) Notionally Equitable	(2) Longer Phase-In	(3) Notionally Equitable	(4) Longer Phase-In
	(%)			
1976 (actual)	3.6	3.6	3.6	3.6
1981	5.8	4.2	9.6	4.8
1986	6.4	4.8	10.0	6.0
1991	6.6	5.4	10.4	7.2
1996	7.0	6.0	10.6	8.4
2001	-	6.6	-	9.6
2006	-	7.0	-	10.6
Fund at Year-End in 1976 \$billion				
1976 (actual)	11	11	11	11
1981	17	16	19	16
1986	30	22	46	25
1991	46	29	79	37
1996	62	35	116	52
2001	79	42	157	74
2011	118	63	256	149
2025	139	51	398	258
Fund at Year-End as % of net capital stock(3)				
1976 (actual)	3	3	3	3
1981	4	4	4	4
1986	6	4	9	5
1991	7	5	12	6
1996	8	5	16	7
2001	9	5	18	9
2011	11	6	23	13
2025	10	4	27	18

(1) Assumes price increases per annum of 3% and wage increases per annum of 5%.

(2) The notionally equitable CPP rate rises gradually as the 'credit' for the cost of income-tested programs declines. The longer phase-in provides for a more gradual transition of rates to the full cost level.

(3) See Footnote (2) to Table XIII-3.

The table illustrates clearly the extent to which relatively small changes in contribution rates and economic assumptions lead to enormous differences in projected fund sizes over a period of several years. The same is true also of demographic assumptions. If the alternative demographic assumptions described in the section on pay-as-you-go rates - which involved both higher birth rates and higher net immigration - had been adopted, the fund sizes shown would have been substantially greater. By 2025, the fund shown in Column (1) of Table XIII-5 would have been nearly half as large again, while that in Column (3) would have been about a quarter larger than shown. Thus, the estimates shown could be on the low side. If an enlarged CPP were introduced, contribution rate paths moving over the same periods towards the full cost of the enriched benefits would also lead to the generation of considerably larger funds than those shown until well into the next century.

For those who attach substantial weight to the presumption that the capital stock may be affected adversely by public pensions, and believe that funding will help offset this effect, a funding path along the lines illustrated under Column (1) of Table XIII-5 may be appropriate. In that event, a substantial proportion of the fund should flow through the capital markets to maximize the probability of the funds being used for investment rather than consumption.

There are also those who are concerned about the magnitude of the fund, and its possible consequences for the economy and for society. Those with this view may doubt that it is possible to ensure that such a massive fund would be totally allocated to investment, as opposed to consumption. They may also be concerned about the effect such a fund might have in increasing the magnitude of government and in disrupting the effective functioning of capital markets. Therefore, they may consider it more appropriate to provide for a slower phase-in of increased contribution rates.⁽¹⁴⁾ The evidence available in this report, and its appendices, suggests that the second perspective should be given substantial weight.

Whether or not the fund flows through the capital markets, it is arguable that the rate of return paid should be what the market would pay - about 3 1/2% in inflation-adjusted terms - which, as Table XIII-5 illustrates, would involve a relatively much smaller fund than would a lower rate of return. This implies a long-term contribution rate of around 7%. As shown earlier, significantly higher contribution rates are associated with lower inflation-adjusted rates of return.

Because of the long-run sensitivity of the fund size to the assumptions, any decision as to an appropriate rate schedule is not likely to be 'final'. A systematic review and appraisal of the progress of the plan, including actuarial projections, must be a regular part of the process, and contribution rates must then be adjusted as necessary to take account of emerging reality.

(14) While contribution rates in respect of public pension plans can hardly constitute an instrument for short-term economic policy, it is desirable that the timing of increases takes into account the possibility that these rates may constitute a depressing influence on aggregate demand.

C. Financing Employer-Sponsored Pensions

The factors discussed above with regard to the financing of public pensions apply in principle also to employer-sponsored pension plans. But the degree of importance attached to the various factors may differ. While society and its governments will continue to exist, individual employers in the private sector come and go. Accordingly, in practice, funding is necessary in the case of employer-sponsored plans in the private sector to ensure the employees that the benefits they have been promised will in fact be paid to them.

1. Public Sector Plans. Chapter IV outlined the reasons why it is desirable to fund public sector employer pension plans. The view was expressed there that unless governments credit to their pension accounts the full market rate of interest, the concessional terms available on borrowings from these sources may contribute to a less than optimal allocation of resources and can be reflected in greater government spending or lower taxes than otherwise would occur. They are likely, too, to be unfair to pension plan members if a total compensation policy is in force. This is because the employer contribution to the pension plan is higher than would be required if market rates of interest were paid and this higher contribution may be used to justify the payment of lower wages or salaries to employees. For these reasons, concessional interest rates should be eliminated.

To meet the concern of those who judge that a market rate of interest will not by itself be sufficient to ensure that government fiscal decisions are neutral, given their continued access to a captive source of pension cash, further steps could be taken. Possible courses of action include: (a) issuance of non-marketable bonds to a trustee standing at arm's length from the government; (b) acquisition (and disposition) in the market by such a trustee of bonds of the government involved; and (c) allowing the trustee to buy and sell all types of marketable securities, subject to the same regulations under pension benefit standards law as private plans. The last measure, (c), would result in the trustee acquiring market securities instead of claims against the government. In turn, this would require the government involved to undertake more of its borrowing in the market. In these circumstances, pension plans operated by governments for their employees would be obliged to play by the same rules as private pension plans. On the other hand, governments might also be subject to criticism for using employee pension funds to acquire large investments in the private sector, though this latter criticism could presumably be mitigated by acting through trustees.

Taking into account these differing concerns, the federal government, in its role as employer, should give careful consideration to investing at least a portion of the new funds entering the federal employee pension accounts through the capital markets.

2. Private Sector Plans. The description of private sector employer pension plans in Chapter IV outlined the causes, magnitude and significance of the unfunded liabilities revealed by actuarial valuations. This section sets out certain measures that should be considered for dealing with problems created by such liabilities.

a) Actuarial Practices. Although wide variations in actual cost methods and actuarial assumptions have not in the past seriously jeopardized the security of pension plans, the range of practices followed makes it difficult - if not impossible - for employees, shareholders and the general public to gain a clear understanding of the financial position of pension plans.

While the cost of pensions over the long run is independent of judgmental factors, actuarial judgment plays a critical role in determining the magnitude of any deficit or surplus and the employer contributions required from one period to another. For this reason, the case for the development of common standards and practices is very strong. Although the actuarial profession and supervisory authorities have been moving in this direction - and modest progress has been made - further steps are needed. There is good cause for both groups to accelerate the pace of their efforts substantially. An incidental advantage of adopting common principles and practices is that this would facilitate the making of appropriate allowances for pension costs in comparisons of total employee compensation.

b) Flat Benefit Plans and other Special Situations. The prevalence of unfunded liabilities in respect of flat benefit plans has already been noted. Among the 642 plans of all types reporting unfunded liabilities, that were shown in Table III-13, the aggregate funded ratio was 68%; within that group, those of a flat benefit type had an aggregate funded ratio of around 50%, as indicated in Table III-14. Moreover, the margins often available to ensure solvency on a termination basis of final average plans do not exist to the same extent in the case of flat benefit plans. Although this difficulty could be partially overcome by the use of conservative actuarial assumptions, the underlying issue is more fundamental. In essence, it is whether the present method of financing flat benefit plans satisfies the spirit or rationale of the funding requirements embodied in current pension benefits standards legislation. Although the letter of the law may be satisfied, as evidenced in at least one recent case, the benefits of members of such plans appear to be much less secure than those provided through many other types of defined benefit plans. Accordingly, the pension regulatory authorities should review this situation, and any others that may be analogous, with a view to developing remedies that will provide greater security of benefits to those who are now members of such plans.

c) Amortizing Deficiencies. To the extent that the proposals earlier in the report will result in increased costs for some employers, the question arises immediately as to the period over which these additional costs are to be spread.

If improvements in pension plans were to be encouraged as a matter of government policy, consideration should also be given to the possibility of longer amortization periods, possibly with gradually increasing dollar payments. The existing practices could be modified in a number of ways.

Firstly, for example, amortization of deficiencies could be required as a constant percentage of payroll over the allowable period, rather than in equal annual dollar payments. This would be consistent with the actuarial practice of taking into account the future growth of salaries and wages when estimating pension liabilities. If the experience occasioning the deficiency were not a continuing one, the method would level the cost impact during the amortization period; but it would also decrease protection and result in a greater drop in costs at the end of the period.

Secondly, amortization of unfunded liabilities could be required at an accelerated pace when the funded ratio of a plan fell below some specified level that was calculated on a consistent basis. This would enhance protection, but initially increase annual outlays.

Thirdly, full funding on a termination basis could be required before any plan improvements not required by law were permitted. Although this would increase protection, it would retard not only extravagant benefit improvements, but also those that were desirable.

Taking into consideration these points, it is suggested that arrangements along the following lines would be appropriate:

- If proposals made earlier under Chapter VI (Strengthening Current Arrangements in the Employer-Sponsored System) or Chapter VIII (Mandatory Employer-Sponsored Pension Plans) were adopted, the allowable period for amortization of the initial costs related to past service should be extended to, say, 25 years, following the precedent adopted when pension benefits standards legislation was introduced.
- Apart from the special arrangements proposed above, unfunded liabilities, without regard to their origin, should be liquidated (subject to transitional provisions where appropriate) over a period of not more than 15 years, as is the current general requirement, differentiated, perhaps as follows:

plans with any unfunded liabilities on a termination basis:	amortization over not more than three years.
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plans with funded ratios of 60% or below on an ongoing basis:	amortization normally to be on an accelerated basis as determined by the supervisory authority. Some degree of discretion should be allowed for the specific circumstances of each case to avoid unnecessarily jeopardizing the continued existence of the employer.
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plans with funded ratios between 60 and 80% on an ongoing basis:	amortization over not more than 15 years, in equal annual instalments for the amount below 80%.
plans with funded ratios of 80% or more on an ongoing basis:	amortization over not more than 15 years, with the option of using a constant percentage of covered payroll (without allowance for a growing plan membership) in lieu of equal annual instalments.

Each of these arrangements would involve actuaries and supervisory authorities in the same judgmental problems as are currently associated with determination of the size and origin of actuarial deficiencies.

It is desirable to make any liberalization of funding rules subject to a minimum payment equal to interest on the unfunded liabilities if this should be greater than would otherwise be required by the amortization standard. This is the approach now followed in some jurisdictions. Moreover, as is described in e), any consideration of liberalized funding requirements should be accompanied by consideration of the desirability for a system of plan termination insurance.

d) Plan Wind-Ups, Mergers, Acquisitions and Bankruptcies. There is much room for misunderstanding and for inconsistency of treatment of pension benefits and pension funding in the event of mergers, acquisitions and plan wind-ups as described in Chapter III. It is clear that they involve issues which deserve serious study and the possible establishment of statutory guidelines to provide far greater uniformity of practice in the interest of plan members, those with deferred pensions, pensioners, beneficiaries and, in some cases, shareholders.

In addition, the accounting and actuarial professions might be requested to develop specific guidelines for the treatment of pension plan assets, liabilities and costs in the process of business valuation, and in accounting for the purchase and/or sale of businesses.

It was noted also in Chapter III that, notwithstanding the benefits that may have been promised by the plan sponsor, the security of members rests solely on the amounts which have actually been or are currently due to be paid over to the trustee or insurer. Bill S-14, The Bankruptcy Act, 1979, proposed to recognize the preferred position of pension and other employee benefit plan contributions due and payable up to \$500 per member in the event of bankruptcy. But pension plans would not rank as creditors beyond that. (The legislation was not approved before the dissolution of Parliament in the spring of 1979.) Given the growing recognition that pension benefits form a part of compensation earned by employees, a good case can be made for providing that pension plans rank as creditors in respect of deficiencies on plan termination, as well as in the case of corporate liquidation or bankruptcy.

e) Plan Termination Insurance. Plan termination insurance would necessitate the creation of an agency that would insure basic pension benefits of plan members and pensioners in the event that a pension plan terminated with insufficient assets to meet its pension obligations. A key question in any such arrangement is which benefits are to be insured and under what conditions. In particular, there is the difficulty that benefits are secured much more effectively in some plans than in others; if the insurance premiums are differentiated according to the degree of risk, the rate structure could be very complex, and onerous for those plans already having financial difficulty. If there is a single rate, cross-subsidies from well secured plans to poorly secured plans will result. Experience with termination insurance in the United States and Germany - countries in which there are many small plans as in Canada - is too short to be helpful. In any event, it is evident that if such an insurance program were to be introduced - in order to avoid abuse - great care would be needed in determining the maximum benefits to be covered, the other limitations needed on eligibility for benefit coverage, and the minimum funded ratios required, if any, to establish eligibility for participation. In addition, consideration would have to be given to what premium structure was appropriate. The safeguards and conditions which prove necessary for the operation of pension plan insurance may themselves well reduce or eliminate the need for such insurance.

f) Investment Portfolio Regulation. It could be argued that pension funds, which represent large pools of savings that are not subject to sudden large withdrawals, are particularly appropriate sources for the provision of equity capital for large projects - such as new resource development. The extent to which they currently provide such capital is not known. Whether current investment regulations are unduly limiting in this respect is a question that lies beyond the scope of this report.

g) Summary and Conclusions. Unfunded liabilities are large, although generally smaller when calculated on a wind-up or termination basis than on an ongoing or going-concern basis. The variety of pension plans, the number of variables on which assumptions must be made for actuarial purposes, and indeed the range of accepted actuarial practices contribute to the difficulty of employees, shareholders and the general public in understanding the costs and financing of employer-sponsored plans. Adoption of common standards and methodology would be helpful, although the complexity of the factors involved will not make this an easy task. The increasing emphasis by supervisory authorities on solvency tests on a plan termination basis works in this general direction by reducing the number of judgmental factors. But although more widespread use of this measure might improve the level of understanding of plan valuations, taken alone it would represent too short-term a focus to provide the degrees of long-run security and cost stability which are desirable.

Funding practices and funding requirements existing currently under Canadian jurisdictions have been effective in most, but not all, cases in protecting plan members. With the passage of time, they have tended to become more stringent because the unfunded liabilities created when funding standards were introduced - for which an extended amortization period was permitted - are being liquidated. The trade-off between the security afforded by full funding and the greater cost stability introduced by extended amortization periods is not easily established. The option introduced in 1977, whereby the period for liquidation of experience deficiencies can be extended from five to 15 years - subject to solvency tests - appears likely to moderate the cost volatility arising from inflationary conditions without seriously jeopardizing security of benefits. Until there has been time to adjust to experience under the new policy, it is not considered appropriate to relax general funding requirements in Canada further, although they remain considerably more stringent than those in the United States.

If, however, improvements in the employer-sponsored pension system were to be encouraged as a matter of government policy, the possibility of some extension of the amortization period should be considered in respect of the initial cost of improvements. But it is premature to determine if such an arrangement should be accompanied by plan termination insurance.

With respect to employer-sponsored pension plans, the following conclusions emerge:

- funding of flat benefit pension plans should be reviewed with a view to developing remedies to enhance the security of benefits in those types of plans;
- the actuarial and accounting professions, and the supervisory authorities, should accelerate their efforts to produce a clear exposition - in easily understood language - of actuarial practices and standards and their significance, together with proposals to reduce the unnecessary variations in them;
- if proposals made earlier under Chapter VI (Strengthening Current Arrangements in the Employer-Sponsored System) or Chapter VIII (Mandatory Employer-Sponsored Pension Plans) are adopted, the allowable period for amortization of the initial costs related to past service should be extended to, say, 25 years, following the precedent adopted when pension benefits standards legislation was introduced;
- apart from the special arrangements proposed immediately above, unfunded liabilities, without regard to their origin, should be liquidated (subject to transitional provisions where appropriate) over periods of not more than 15 years, as is the current general requirement, differentiated as to amortization method and period on the basis of the funded ratio achieved;

- consideration should be given to the establishment of statutory guidelines to provide more consistent treatment of pension funding and benefits in the case of mergers, acquisitions and plan wind-ups;
- while legislation introduced in the 1979 session of Parliament would have extended limited creditor status to pension plan members with respect to contributions due and payable in the event of bankruptcy, there is a good case for granting plan members full creditor status in respect of deficiencies on termination of the plan and in cases of corporation liquidation and bankruptcy; and
- the desirability of plan termination insurance should be kept under continuing review, taking into consideration developments in Canada and the emerging experience in other countries.

With respect to public sector employer plans in particular:

- the accounting format associated with the funding of private plans should be followed also in respect of public sector employer plans (as described in Chapter III), and concessional rates of interest should be eliminated; and
- public sector employers should be encouraged to invest through the market at least a part of the pension contributions now flowing to consolidated revenue funds.

CHAPTER XIV

THE TAX-ASSISTED SUPPLEMENTARY PROGRAMS

A. Introduction

This chapter discusses government policies relating to the tax-assisted, supplementary programs of the retirement income system. The supplementary programs referred to are the plans that are registered for tax purposes, i.e. Registered Pension Plans (RPPs), Registered Retirement Savings Plans (RRSPs), Deferred Profit Sharing Plans (DPSPs), and the proposed Registered Employee Pension Funds (REPFs). Five issues are set out for consideration:

- whether, in the event of a significant expansion in mandatory pension arrangements, remaining supplementary employer-sponsored plans should be purely voluntary, at least with respect to employee contributions (i.e. should compulsory employee contributions to supplementary RPPs be proscribed?);
- whether, in the event of a significant expansion in mandatory arrangements, the proposals set out in Option 1 (Chapter VI) relating to vesting, deferred pensions and pensions-in-pay should apply to supplementary employer-sponsored plans;
- whether the nature of the tax assistance provided through RPPs, RRSPs, DPSPs and the proposed REPFs might be modified, in a revenue neutral way, so as to:
 - reduce differences between individuals in the amount of contributions that may be deducted from taxable income for retirement savings, possibly through the establishment of a single comprehensive annual deduction limit on contributions to all registered retirement income plans; and
 - provide for an increase in such an annual limit with age;
- in the event that no action is taken on the item immediately above, whether the maximum amount of tax assistance available to any individual through various registered retirement income plans should be more tightly controlled; and
- whether members of RPPs should have more choice with respect to the form in which they receive their pensions. (They must now be in the form of a life annuity.)

B. No Compulsory Employee Contributions to Supplementary RPPs

Mandatory arrangements of the scale described earlier under Options 3 and 4 (Chapters VIII and X) would assure many people of substantially more retirement income than is provided through current pension arrangements. A much higher proportion of people would achieve living standards in retirement that would be more or less in line with those to which they had grown accustomed in their working years. Under these circumstances, any requirement that compels employees to contribute to supplementary pension arrangements would seem to constitute an unwarranted intrusion on their personal freedom. Therefore, in the event of an expansion of mandatory arrangements, it is suggested that neither employers nor unions should have the right to require that employees contribute to supplementary pension plans, as a condition of their employment; i.e. all supplementary RPPs should be non-contributory on the part of employees.

C. Minimum Standards

It was argued earlier that there is little justification for the kinds of differences that now occur in the treatment of long- and short-service employees in employer-sponsored pension plans. This conclusion applies whether or not a larger mandatory pension system is established. Thus, the more stringent vesting provisions discussed under Option 1 in Chapter VI should apply to any arrangements that supplement the enlarged mandatory plans. As for deferred pensions, if governments guarantee their real value (the possibility of which was discussed in Chapter IX), the guarantee should be limited to some maximum amount, in order to provide some limit on the risk of higher than expected costs. Beyond that maximum, deferred pensions should be treated as described in Chapter VI. In the event that no government guarantee is available in respect of deferred pensions, it is again suggested that they should be treated as set out in Chapter VI.

The same reasoning applies with respect to pensions-in-pay. Any government guarantee protecting their real values should operate only to a fixed limit and pension payments above that amount should be adjusted in accordance with the level of inflationary earnings.

D. Added Flexibility and Fairness in Tax Assistance

Many people do not begin to provide privately for their retirement until their middle years. During the early working years, old age seems remote and current consumption has a high priority. Subsequently, the financial implications of raising a family and, often, of purchasing a home, leave little room in family budgets for saving. By the time people reach their middle forties, financial pressures often lessen and, at the same time, the prospect of retirement begins to loom larger. At that point they may regret not having saved more in earlier years and may seek to compensate for their previous failure to set some money aside for retirement.

These comments may have particular relevance to women. Frequently, during their twenties and thirties, they are raising a family and spend little or no time in the paid labour force. By the time they reach their forties or fifties, many may wish, or given changed marital circumstances, may be obliged, to enter or re-enter the paid labour force. As a result, women on average have fewer years of earnings than do men.

At present, contributions to registered retirement income plans are generally restricted by a ceiling that is defined on an annual basis. Accordingly, these vehicles are of greatest value to those who can make use of them each and every year. For those who are able to save substantial amounts in some years, and little or nothing in others, the annual ceiling may limit their ability to take full advantage of the tax deferrals potentially available through registered retirement income plans. Those who commence a career relatively late in life cannot readily compensate for the years in which they had no earned income. More generally, those with 'lumpy' incomes, including many self-employed individuals, may find that in 'lean' years they cannot afford to make substantial tax deductible contributions to the extent that they would like, whereas in 'fat' years they are limited in their tax deductions by the annual ceiling.

There is another concern about the tax assistance available for retirement income purposes. As described in Chapter IV, the ability of an individual to take advantage of such assistance is heavily dependent on whether he or she is able to join an RPP. It also depends on whether any such plan is of a defined benefit or defined contribution type, and on whether the RPP member eventually has his accrued benefits vested in him. Deduction limits in respect of an individual can vary from as low as \$3,500 annually to as high as \$9,000, and even the \$9,000 figure can be exceeded in certain situations.

To add to the flexibility of the individual employee, and also reduce the differences in treatment just described, two broad approaches can be considered - a lifetime benefit ceiling approach and a comprehensive annual deduction ceiling that increases with age. It should be noted that these approaches are only relevant to people able to earn enough and save enough to be effectively limited by the existing annual tax deduction ceilings, i.e. upper-middle and upper-income groups.

1. A Lifetime Benefit Ceiling. While there are already provisions in the Income Tax Act that allow the buying back of pensionable 'past service' with the same employer and in certain other limited circumstances, it would be possible to go further in making the tax provisions more flexible so as to better fit the needs and circumstances of individual taxpayers. One way of doing this that should be considered is to establish a lifetime benefit ceiling that would apply to all of the retirement income from plans that enjoy tax assistance - the C/QPP, RPPs, DPSPs, RRSPs and prospective REPFs (and also, possibly, to Registered Home Ownership Savings Plans (RHOSPs)). It should be noted that without a dramatic reduction in the amount of tax deferral now allowed to individual taxpayers, it would not be possible to make this approach revenue neutral.

Suppose that the benefit ceiling adopted were \$40,000 annually (calculated so that the pensions-in-pay ultimately anticipated would be price indexed and would provide for an appropriate survivorship provision) and that the maximum pension available from the C/QPP and/or mandatory RPPs were \$10,000. This would leave a minimum of \$30,000 for tax-assisted supplementary arrangements. Take the case of an individual anticipating the maximum \$10,000 C/QPP pension. (In forming his expectations about the size of his C/QPP pension, the individual would be required to assume that his earnings for all future years, until age 65, would bear the same relationship to the Year's Maximum Pensionable Earnings (YMPE) as they did in the year in question.) For tax purposes, a periodic calculation would be made, based on current annuity rates, of the size of the capital accumulation that would be needed to purchase an annual \$30,000 annuity payable when the taxpayer reached age 65. If that amount were \$400,000, the taxpayer in question could then deduct from taxable income any contributions to a registered retirement income plan, provided the total accumulation in the plan, including investment return, did not exceed \$400,000. Each year's contribution, and all earnings on amounts previously set aside, would reduce the remaining available deduction. If a 30-year-old deducted \$4,000 a year for five years and if, in addition, over the five years the funds in the registered vehicles had earned \$5,000, then a total of \$25,000 of the aggregate allowable capital accumulation limit would have been used. The benefit ceiling and its associated capital accumulation limit would have to be indexed, or updated periodically, to keep it in some reasonably constant relationship to average wages and salaries (AWS) in the economy.

The taxpayer (and Revenue Canada) would receive annual statements from the employer, trust company and/or insurance company showing the amount in each of his registered retirement income plans.(1) If their total exceeded the specified ceiling the individual concerned would have to pay tax on the excess.(2)

- (1) The individual in a supplementary defined benefit pension plan would receive annually from his employer a statement regarding the amount of retirement income he might be expected to receive on the assumption that he continued to work until retirement under the same conditions. If he were 45 years of age, had worked for 15 years, was in a 1 1/2% career average plan and if his average inflation-adjusted salary had been \$20,000 for those 15 years, his estimated pension income would be $(0.015 \times 35 \times \$20,000)$, i.e. \$10,500 annually. (The 35 figure is based on the assumption that the individual would be earning a pension entitlement from ages 30 to 65.) This \$10,500 would be set against the hypothetical maximum tax-assisted pension of \$40,000 thus reducing the remaining allowable supplementary tax-assisted amount to \$29,500 minus the anticipated C/QPP pension (\$19,500 if the individual were earning at a rate expected to yield the hypothetical maximum C/QPP pension of \$10,000). The \$400,000 capital sum would be lowered correspondingly.
- (2) Therefore, whether or not the law required that the excess be withdrawn, withdrawal would likely occur in most cases.

This approach would entail the adoption of a comprehensive ceiling for all tax-assisted retirement savings. The establishment of such a ceiling on total benefits would lead to greater uniformity of access between those who happen to be using different types of registered retirement income plans. Those who did not start to save for retirement until late in their careers would no longer be disadvantaged because of their inability to recapture deductions forgone in earlier years; those who started early would enjoy a long period of tax deferral, but once their accumulation reached the ceiling they would have to pay taxes on the income.

The lifetime benefit approach also raises some difficulties. It would provide additional tax deferrals to those with high but lumpy incomes, and to those who do not commence working until their middle years or later, but who then earn high incomes. This means that if it is to be revenue neutral, it must reduce the tax deferrals available to some other group. For the measure to be costless, it is roughly estimated that the maximum lifetime accumulations allowable might have to be no greater than the amount which would buy a pension of \$10,000-15,000. Therefore, those likely to be disadvantaged by it are those who earn consistently high incomes over a substantial part of a long working life. (With the \$40,000 figure that has been used for illustrative purposes above, the revenue cost is estimated at \$100-200 million annually.)

The adoption of such a ceiling could also create two administrative difficulties. One relates to the possibility that Revenue Canada might require substantial additional resources to minimize tax evasion.(3) A second is that the benefit ceiling approach would require periodic reporting of the value of all deferred pensions and accrued benefits of active members. As such, an important additional reporting requirement on employers and insurance companies would result. While 'rules of thumb' might reduce this load (perhaps reporting of some small accumulations could be less often), this consideration needs to be taken into account.(4)

2. Adoption of Comprehensive Annual Deduction Ceilings that Increase with Age. Preliminary investigation suggests that, quite apart from financial considerations, the administrative problems associated with the establishment of a lifetime benefit ceiling might well make it impractical. An alternative approach is suggested here that is more likely to be workable. This would involve the reform of the annual deduction ceilings so that all tax deductible contributions to registered retirement income plans (RPPs, RRSPs, DPSPs, etc.) would be covered by a single annual comprehensive limit - a limit that would increase as the taxpayer grew older. Employer

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- (3)At present, no mechanized system exists whereby Revenue Canada can readily ensure that a taxpayer with RRSPs in several locations across the country would report all his accumulations. This is irrelevant now since it is generally in the taxpayer's interest to report such RRSP contributions, because they are the basis for his tax deduction. But under a benefit ceiling approach, there would be no such incentive once the ceiling were reached.
- (4)In Chapter XVII it is suggested that there may be other grounds for requiring such reporting.

pension contributions would be allocated to individual employees and be taken into the taxable income of the individual employees. However, at the same time, the annual deduction limits available to individual employees would generally be higher than at present. Employers would not deduct their costs as pension contributions, but as wage or salary expenses. This approach would substantially eliminate the large existing differences in the amount of the tax deferral available to taxpayers according to their employment circumstances. It would also ensure firmer control over the amount of government revenue forgone than under the benefit ceiling approach.

An example of such an approach is illustrated in Table XIV-1. The illustrative example shows higher annual deduction ceilings for older citizens than are now generally available to them. To keep this approach revenue neutral, this requires lower deduction ceilings for younger taxpayers.

Table XIV-1

Hypothetical Age-Related Comprehensive Annual Limit on Personal
Deductions of Employer/Employee Contributions
to Registered Retirement Vehicles

Age	Comprehensive Annual Deduction Limit
	\$
Under 35	4,000
35 to 44	5,500
45 to 54	7,500
55 to 70	9,000

The adoption of this approach would enable the government to exercise greater control over revenue costs than in the case of the lifetime benefit ceiling, but it would provide somewhat less flexibility to the taxpayer than the benefit ceiling approach. It would be primarily of benefit to those in the upper- and middle-income brackets during their 50s and 60s, including the self-employed, who may have had more modest incomes when they were younger and who were unable or unwilling to provide adequately for their retirement during those years.

The major difficulty arising out of this scheme would be that of determining the amount of employer contributions that should be included in the taxable income of employees in the case of defined benefit pension plans. This problem could probably be overcome by the introduction of an allocation formula that took account of the age and earnings of the employee and the particular nature of the defined benefit plan to which he belonged (though there are important trade-offs in the design of this formula between fairness and administrative practicalities).

Of the two alternative approaches outlined here, the second one - involving a comprehensive limit on annual tax-deductible contributions of employer/employee that increases with age - would appear to be the more workable. Under this approach, it is also easier to control costs; the approach is also less regressive.

E. Limitations on Tax Assistance

At present, the Income Tax Act specifies annual deduction ceilings for RPPs, RRSPs, and DPSPs. But the Act does not specify the maximum pension benefits that may be tax assisted.

Nonetheless, a benefit ceiling for defined benefit RPPs is specified in the Revenue Canada Information Circular 72-13R5. That circular establishes the conditions that must be satisfied in order for a pension plan to be registered for tax purposes. It provides that such plans may not pay initial benefits of more than approximately \$60,000 (\$1,715 times the number of years of service up to a maximum of 35 years), or 2% per year of pensionable service up to a maximum of 35 years as a percentage of the average of the employee's highest earnings in a consecutive three-year period (a maximum of 70% of best average earnings), whichever is the lesser. The pension benefits may be indexed to the Consumer Price Index. The benefit may also include a survivorship provision and an early retirement provision. For a person retiring at age 60, a \$60,000 indexed pension with a 50% survivorship provision would cost in excess of \$1 million.

If it were decided to adopt the comprehensive annual deduction limit that increased with age, it is possible that Revenue Canada's benefit ceiling in defined benefit plans could be eliminated. If the tax system is left largely as is, however, or if it turns out that a benefit ceiling is still needed under a comprehensive annual deduction limit (which could be the case if the formula for allocating the pension contributions of employers to employees were very general), a question arises about the extent to which the tax system should be used to assist the retirement incomes of upper-middle and upper-income people. If the limit remains as high as the \$60,000 pension now allowed for in defined benefit plans, that would imply allowing tax deferred accumulations of well over \$1 million in respect of individuals. In this regard, it is not evident why general tax revenues should be used to finance pensions that are as high as four times the average wage in the economy. Some reduction here should be considered.

If the current limit were considered to be too high, new legislation might leave the \$60,000 figure but allow the real value of the \$60,000 to erode through time, by not permitting further upward adjustment for inflation. It is suggested that a ceiling somewhere in the range of two to three times AWS (\$30,000 to \$45,000 range in 1979) may be sufficient. Once the ceiling is reached, whether it be twice or three times AWS, it should rise with AWS.

Such a ceiling, of course, does not preclude the provision of higher pensions outside the framework of tax assistance.

F. Forms of Receiving Retirement Income

The tax assistance available to those contributing to RPPs and to RRSPs was introduced to encourage the deferral of income for use in retirement - not to avoid taxes or accumulate estates. However, requirements that all retirement income from RPPs be taken in the form of a life annuity may be unduly restrictive. The merit of the life annuity approach is that it assures the individual of a flow of retirement income throughout his lifetime, no matter how long he lives. Life annuities pool the risk associated with uncertain life spans and make sense in relation to that portion of retirement income which is considered to be essential and has consequently been made mandatory. In the case of the mandatory part of the system, it has been concluded that retirement income of individuals should not be allowed to fall below a certain level. Only a life annuity can provide protection, assuming that its real value is preserved.(5)

But for the supplementary portion of the system, similar requirements need not prevail. The option now available to RRSP contributors to receive benefits in the form of a term annuity to age 90 (which can be indexed, including the RRIF) might, therefore, also apply to supplementary RPPs. (This option was provided for in the 1978 budget provisions in respect of RRSPs being matured.) Indeed, consideration should be given to allowing individuals even more choice by allowing 'withdrawals' from registered retirement income plans, after the age of 60, at a faster rate than is now provided for under the Income Tax Act.

G. Conclusions

Whether the existing mandatory retirement income system is expanded or not, consideration should be given to the following proposals:

- establishment of comprehensive annual limits on the amount of tax-deductible contributions that can be made on behalf of individual employees to all registered retirement income plans, the amount of the annual limit being increased with age;
- if comprehensive annual limits are not implemented, or if they are implemented in a way that makes it desirable to retain a benefit ceiling, the ceiling on the amount of tax-assisted retirement savings should restrict the benefits provided from such savings to an amount somewhere in the range of two to three times the level of AWS, but allowing also for the price indexing of such benefits and the inclusion of a survivorship provision; and
- permitting retirement income from all supplementary plans to be drawn in the form of a life annuity (including an indexed annuity) or a term annuity to age 90 (with indexing over its term, including an RRIF).

(5) To date, indexed annuities have not been available, although variable annuities have occasionally been sold by some life insurance companies.

In the event the mandatory pension system is expanded significantly, employers and unions should be prohibited from requiring, as a condition of employment, that employees contribute to any supplementary RPPs.

Also, in the event of a significant expansion of the mandatory pension system, it would still be important for all supplementary employer-sponsored plans to provide for early vesting and for adjustment of both pensions-in-pay and deferred pensions by an amount at least equal to the inflationary returns earned on those assets of the pension fund held in respect of current pensioners and those with deferred pensions. Finally, if there is a significant expansion in the pension system, consideration should be given to allowing even faster withdrawals of funds from registered retirement income plans after the age of 60 than specified above.

CHAPTER XV

AGE OF ENTITLEMENT TO PENSION BENEFITS/RETIREMENT AGE

A. Introduction

Public interest in policies and practices relating to retirement age has recently been on the rise. In response, the Senate established a Committee and made these issues a principal subject of its enquiry. This report does not seek to go over all the ground the Senate Committee report may be expected to cover. However, this chapter does touch briefly on two of the issues that arise from the public interest in retirement age policies.

The first relates to the fact that age 65 is the age of entitlement to benefits from public pension programs and, more generally, the most common age of retirement from the labour force. Is age 65 the most appropriate age for entitlement to public pension benefits? Or should it be lower, say, age 60, or higher, perhaps 70? The second issue considered is whether it is desirable, and practical, to provide more scope to those wishing to retire at ages other than those mandated by employers.

B. Age 65 as the Age of Entitlement to Public Pension Benefits

Chapter III indicated that a high proportion of workers permanently leave the labour force at age 65. This undoubtedly reflects the fact that 65 is the normal pensionable age in most employer-sponsored pension plans, and is also the age of entitlement to Old Age Security (OAS), Guaranteed Income Supplement (GIS), and Canada and Quebec Pension Plan (C/QPP) retirement benefits.⁽¹⁾ The following two sections examine the case for earlier and later entitlement to public pensions.

(1) There are other, less important factors that reinforce this practice. One is that unemployment insurance benefits are no longer available after age 65 because it has not been considered appropriate for a person drawing OAS/GIS benefits to also have an entitlement to unemployment insurance. Another is that Revenue Canada rules do not permit employer-sponsored pension plans to be registered for tax purposes if the plans allow the member to receive a regular salary and a pension from the same employer at the same time, unless that plan member is at least 65 years of age. Each of these rules reflects relatively recent changes.

1. Case for Earlier Entitlement. Those who call for a lowering of the age of entitlement to public pensions generally do so on three grounds. They claim that earlier entitlement to full benefits is something a wealthy country can afford. Secondly, they argue that, to the extent earlier entitlement to benefits causes workers to withdraw from the labour force sooner than otherwise, the current high levels of unemployment would be reduced. Finally, they argue that a high proportion of those just under 65, while not sufficiently disabled to qualify for disability pensions, lack the physical strength or mental stamina to hold down a full-time job; or that they may be chronically unemployed for other reasons. In either case, this group requires assistance.

Each of these arguments in favour of earlier entitlement is considered here briefly. On the first, it should be noted that the cost of earlier entitlement would be very substantial. Benefits under OAS alone were shown in Chapter III to be \$3.7 billion in 1977-1978; and they would have been more than double this figure if the age distribution projected for 2031 had existed in 1977-1978. A lowering of the age of entitlement to 60 would have raised outlays on OAS in 1977-1978 to well over \$5 billion and to twice this figure under the age distribution for 2031. Outlays for income-tested programs would add further to the costs of lowering the age of entitlement and would dwarf the potential reductions in outlays for the Spouse's Allowance (SPA) and social assistance applicable to the 60 to 64 age group. Thus, for reasons of cost alone, suggestions to reduce the age of entitlement should be treated with great caution, the more so because the proportion of the elderly in the population will rise substantially during the next several decades. In any event, to the extent that there is a willingness to enlarge the mandatory pension system, it is suggested here that greater priority attaches to providing higher pensions to those who are 65 and over than to lowering the age of entitlement to such benefits.

There is a related point that requires consideration. To the extent that earlier entitlement induces earlier withdrawals from the labour force, there would be adverse effects on the potential size of the future labour force. As already noted in Chapter II, the aged-dependency ratio will rise dramatically in the first three decades of the next century. Changing the age of entitlement to pension benefits could increase in a dramatic way the large economic and social adjustments that this changing age structure seems likely to require of future generations.

The second argument for a lower entitlement age is that it will reduce unemployment. Although earlier entitlement to benefits might have an effect on the labour force participation rate of the elderly, the short-run effect on the unemployment problem is not likely to be very significant. Vacancies created by retirement are usually first filled from within the organization of the employer, giving rise to a chain reaction and leading to a demand for additional staff from the outside only after a considerable period of time has passed. Accordingly, policy initiatives for earlier entitlement to benefits would probably

begin to have a noticeable effect on the unemployment rate only with a lag, making such initiatives an inappropriate tool for dealing with unemployment that is cyclical in nature.

Moreover, to the extent that unemployment is related to demography, it would also appear inappropriate to seek a solution by lowering the age of entitlement, since the age structure of the population is now changing - the rate of growth of those between the ages of 18 and 64 has already begun to decline and may be expected to continue to do so.(2)

Earlier entitlement to public pension benefits has also been advocated because of the high incidence of disability and chronic unemployment in the 60 to 64 age group. A case can be made for selective entitlement to benefits for those in this group. But such a case does not justify a general reduction in the age of entitlement to public pension benefits.

On balance, therefore, the case in favour of a general reduction in the age of entitlement to public benefits is weak. The price is high, both in terms of the effect on taxpayers and on the size of the future labour force; a lower entitlement age is also unlikely to reduce current unemployment levels in a significant way. Whether conditional retirement benefits should be made available to those aged 60 to 64 who have ill health, or are chronically unemployed, is a separate matter discussed later in this chapter.

2. Case for Later Entitlement. The case for later entitlement is essentially based on cost considerations, and possible effects on the future supply of labour. In turn, these factors will be heavily influenced by the future age structure of the population and, in particular, the future aged-dependency ratio. The projection in Chapter II showed that for every 100 persons aged 18 to 64 in 2031, there would be 32 persons 65 or over. Today, there are just over 14 persons 65 or over for every 100 in the 18 to 64 age group.

If there were a gradual return toward more traditional birth rates, current concern about the aged-dependency ratio could well turn out to be a matter of limited actual consequence for future generations of workers. But if the birth rate remains at current levels, or drops even lower, and if the consequent rise in the aged-dependency ratio were accompanied by a rise in the total burden carried by the taxpayers in respect of all those who do not work - the old, the young, the disabled, etc. - this could eventually lead to strong taxpayer pressures for a reduction in pension benefits for those over the age of 65.

(2) Some European countries, for reasons of employment policy, are experimenting with a reduction in the age of entitlement to their public pensions. While the reductions are meant to be temporary, it is too early to judge whether, in fact, this will prove to be the case.

This uncertainty about the future poses a dilemma. On the one hand, it is inappropriate to act now to raise the age of entitlement to pension benefits - even if the initial rise were only to begin to take effect in ten year's time - because no one can be certain that the future burden will be too great. Who can be sure about future birth rates and future rates of immigration and of labour force participation? On the other hand, if no legislative action is taken within the next decade or so, it may be increasingly difficult thereafter for governments to delay paying pension benefits to people then reaching 65 years of age, even if economic circumstances warrant such a delay. Those approaching 65 at that time will have structured their personal savings and employer-sponsored pension plans on the assumption that the OAS and C/QPP would continue to be available at age 65; they will also have paid taxes and pension contributions to finance benefits, beginning at age 65, for those who retired before them, and they will consider that they should have the same entitlement. (It is important to note, in this regard, that future improvements in productivity cannot be expected to finance pensions for the increasing proportion of elderly, simply because public pension benefits tend to be improved - either contractually (C/QPP) or on an ad hoc basis (OAS/GIS) - to more or less reflect improvements in salaries and wages, which in turn are linked to productivity growth.)

This dilemma suggests the need for advance planning. One approach to the concern about the anticipated rise in the aged-dependency ratio is to establish criteria and procedures - through legislation - that would determine if and when changes in the age of entitlement would be implemented. Various statistical measures - dependency ratios, taxpayer burden or rates of labour force participation, for example - could be selected as criteria relevant for determining the need for a change in entitlement age. When these measures together reached or exceeded a statutory threshold point, procedures would be set in motion to phase in changes in the age of entitlement. If, for instance, in 1985, it were found that a threshold laid down by legislation had been exceeded, the age of entitlement might be raised by, say, six months to 65 1/2, beginning ten years later - in 1995. (The legislation could also be developed so that the maximum allowable rise in entitlement age at one time was one year (e.g. from 65 to 66) and that such delays could be implemented at most only once every five years. In this example, the need for a change in the entitlement age would be determined by reference to the criteria established in law in 1985, 1990, 1995 and so on.)

This approach would provide those most affected with ample time to adjust to a rise in the age of entitlement. Such legislation could also provide that if a specified number of Members of Parliament so wished, they could require a debate in the House of Commons in which they might make a motion that the change in entitlement age not be implemented. Such a debate might be held, say, two years before the actual implementation of the change in entitlement age (1993 in the example above). If in the interval (between 1985 and 1993), economic or other relevant circumstances had changed, or for any other reason it were judged inappropriate, Parliament could forestall the rise in the age of entitlement that would otherwise be required.

This report does not offer a specific suggestion on the relevant criteria for changing the age of entitlement. Rather, the report simply suggests the type of approach that might enable governments to adjust to any of a range of possible scenarios. The attraction in the approach is that it would make clear to all Canadians that their entitlement would be conditioned by future events. It also paves the way for future governments to act in this area if economic and financial conditions require it.

C. Flexible Retirement Age

The second question dealt with in this chapter is flexibility with respect to the age of entitlement to pension benefits and age of retirement. Whether or not age 65 remains the normal retirement age, can public policy do more to allow those who wish to work later, or to retire earlier, more freedom to do so?

1. Upward Flexibility. At present, there is little upward flexibility with respect to age in the retirement and pension systems. Many employers do not permit employees to continue working after a specified age, usually 65. In addition, actuarially increased pensions are not available under the public pension plans for those who wish to continue working beyond age 65.

There are some exceptions to this general orientation. The income tax system, for example, permits pension income to be transferred into Registered Retirement Savings Plans (RRSPs) without regard to the normal tax-deductible limits. This provides some incentive to work for those who are receiving a pension. A second exception is that the C/QPP provide that earnings received between ages 65 and 70 can be used to replace earlier periods of low or zero earnings and thus increase the amount of C/QPP benefit entitlement.

The two sections that follow examine the case for and against mandatory retirement, the practice that most reduces upward flexibility in the retirement income system.

a) Case Against Mandatory Retirement. There are several arguments against the use by employers of a mandatory retirement age. One is simply that requiring a person to cease work because of his age is an infringement of his human rights. A second is that terminating a person's working life at a pre-determined age carries with it a large price both in social and human terms. Both arguments are based on evidence that chronological age is generally a poor indicator of ability to do a

job.(3) A third argument is that for some individuals, greater freedom to work in their later years can be important in supplementing an otherwise meagre pension income. Available evidence suggests that, in the absence of mandatory retirement practices, a relatively small proportion of workers who would otherwise be retired would continue on the job.(4)

b) Case for Mandatory Retirement. Those arguing for mandatory retirement reflect the concerns of many employers who emphasize the need to be able to plan their business operations effectively and to strive for continuing improvements in productivity. Traditionally, employers have viewed mandatory retirement as a part of a personnel policy that enables them to retire older, less efficient, employees without either confrontation or stigma. This was believed to permit the promotion of younger, more able, and therefore more productive workers. If mandatory retirement were to be abolished, some employers believe they would be forced to carry out more rigorous personnel evaluation of older workers than is now their practice, in order to determine if these employees

(3)See, for example, C.H. Kelleher and D.A. Quirk, "Age, Functional Capacity, and Work: An Annotated Bibliography", Industrial Gerontology, Fall 1973; E.L. Meier and E. Kerr, "Capabilities of Middle-Aged and Older Workers: A Survey of the Literature", Industrial Gerontology, Summer 1976; D.P. Schwab and H.G. Heineman III, "Effects of Age and Experience on Productivity", Industrial Gerontology, Spring 1977. A Canadian study by the Department of Labour entitled The Aging Worker in the Canadian Economy (Ottawa, 1965) found that older employees perform as well or better than younger employees.

(4)Studies in the United States indicate that less than 10% of male workers who retire due to pension rules describe themselves as willing and able to work but unable to find jobs. In Canada, according to the 1975 Retirement Survey, only 6.8% of active males would prefer to retire at age 66 or later, but among retired males 36.2% would have preferred to retire later than age 65. Depending upon whether this difference between active and retired respondents is the result of a change in attitude after retirement occurs (or as it becomes imminent) or of the attitudes of different cohorts, the response to greater upward flexibility could be substantial or relatively minor.

were worth retaining. Such evaluations would add to their administrative burden and cost and might also lead to the early termination of some workers who would otherwise have been kept until age 65.(5)

Some labour unions also support mandatory retirement based on age, perhaps because it is seen as creating employment opportunities for young members. They have also been concentrating on negotiating better pensions at earlier ages and may well see upward flexibility with respect to retirement age as endangering past and possible future gains in these areas.

c) Enhancing Upward Flexibility in Retirement Age. There are clear social advantages to allowing those who wish to work beyond the normal retirement age of employer-sponsored pension plans to do so. There are likely as well to be some economic advantages although the potential disadvantages to those operating businesses should not be dismissed lightly.

(5) Several professional and employer organizations, including the Canadian Institute of Actuaries, the Association of Canadian Pension Management, the Council of Canadian Personnel Associations and the Canadian Federation of Independent Business submitted briefs to the Special Senate Committee on Retirement Age Policies, which expressed support for allowing people to work as long as they are able. On the other hand, most large employers and their associations were not enthusiastic about the prospect of losing their right to retire workers on the basis of age alone. Their concerns, however, did not seem to be based upon the belief that older workers were, by and large, less productive than their younger counterparts, nor were they necessarily opposed to providing greater flexibility with respect to working beyond age 65. They were more concerned that changes would be imposed without adequate study and preparation. For example, the Canadian Manufacturers' Association and the Canadian Chamber of Commerce, in a joint brief, warned against hasty implementation, without further study of long-term effects, and stressed the need for a phase-in period, but did not oppose the idea in principle. Nor does a recent report by the Conference Board, "The Ban on Mandatory Retirement at 65", in discussing the change in mandatory retirement rules in the United States, find much concern about the productivity of older workers. None of the respondents saw below standard performance of older workers as significant cause for concern and most estimated less than 10% of such workers could be viewed as problem cases. They did express concern, however, and this was echoed in briefs to the Senate Committee by Canadian National Railways, Amoco, Canada Petroleum Company and Rockwell International, about the possibility of inordinate expenses and effort required to justify retiring individuals who were no longer productive. These briefs suggest that employers are more concerned about the potential costs associated with the relatively few problem cases than about a general decline in productivity among typical workers who might elect to continue working after age 65.

In view of the work of the Senate Committee in this area, this report offers no firm conclusions on this matter. But given the arguments against mandatory retirement, it does seem reasonable that, in future discussions of this question, the burden of proof be shifted from those who wish to abolish mandatory retirement to those who wish to maintain the practice.

Consideration should be given to two further measures that would enhance the upward flexibility in retirement age:

- providing for actuarial increases to OAS and C/QPP benefits when receipt of payment is deferred beyond age 65. While essentially the same incentive is now available through the RRSP tax-free roll-over provisions, it is probably not well understood by some taxpayers. Actuarial increases, on the other hand, would be highly visible and easily understood and would provide a clear signal to employees and employers alike of the desire of governments to encourage workers to continue in the labour force beyond age 65; and
- requiring employer-sponsored pension plans either to increase pensions actuarially if retirement is deferred beyond age 65, or to pay them at that age regardless of whether the employee continues to work or not. This would ensure that any employee who elected to work after age 65 would have an opportunity, either through actuarial increases or by use of the RRSP roll-over, to qualify for a higher retirement income when retirement actually occurred.(6)

2. Downward Flexibility. The case for downward flexibility in retirement age involves two considerations. Firstly, what provision should be made for those in the 60 to 64 age group who, for reasons of ill health or chronic unemployment, cannot work? Secondly, should current pension arrangements - public and private - accommodate more readily those who simply prefer, as a matter of personal choice, to retire earlier?

A suggestion sometimes made is that benefits similar to those provided by the OAS/GIS should be made available for those in the 60 to 64 age group if they meet certain conditions with respect to their health or the period of their unemployment. Criteria for qualifying for C/QPP disability benefits might also be relaxed for those in the 60 to 64 age bracket. The idea of making available conditional benefits for those in this age group is essentially similar to broadening the insurance characteristics that are already part of the C/QPP.

(6) Changes to the Unemployment Insurance Act to allow for the payment of unemployment benefits after age 65 for those who have delayed receipt of public pension benefits may also require consideration. Care would be needed in working out the details in order to minimize the possibility of abuse.

A problem in implementing this proposal is that the use of health, occupational and related criteria as the basis for providing early retirement benefits gives rise to difficulties in determining who is to be eligible for benefits; programs of this type can lead both to substantial administrative discretion and administrative costs. If this first problem could be resolved satisfactorily, a second and important question remains. Is it appropriate that the federal government expand the scope of its direct assistance to those under the age of 65? The provincial governments already offer a range of services to those in that age category and may be better placed to meet the specified need. In any event, if the federal government were to wish to assist directly people in these age categories, under the conditions noted, consultation and agreement with the provinces would be needed. Here, it is suggested only that additional consideration need be given to this issue.

On the second point, there are many employees who would wish to have access to pension benefits before the normal entitlement age even given the fact that such benefits would be reduced to reflect the longer period of payment.

As for the employer-sponsored system, at first glance it appears to facilitate downward flexibility in retirement age by providing entitlement to benefits before normal pensionable age. For instance, Chapter III indicated that in the employer-sponsored pension system, almost all members belong to plans that have provisions whereunder employees who leave the employer before the normal pensionable age of the plan can begin to receive a reduced pension. But the flexibility afforded by these provisions is of little or no value when the size of the pension available is very small. These early retirement provisions would have more meaning if an enlarged pension system were in place.

With respect to the public pension system, proposals are often made for earlier entitlement to OAS and C/QPP benefits since needs and tastes vary from one person to another. On first inspection, such proposals have much to commend them, if the flexibility implies an actuarial adjustment of benefits coming into pay. The essence of actuarial adjustment is that total program costs would remain the same. Costless measures that more effectively tailor programs to individual circumstances seem worthy of support. (GIS benefits are designed to provide floor incomes and could not, therefore, be sensibly reduced if taken earlier than age 65.)

The provision of actuarially reduced OAS and C/QPP pensions would involve an important cost, however, because of the way in which the GIS operates. The GIS (and provincial top-ups) provides benefits beginning at age 65 (except the top-up in British Columbia which provides benefits at age 60) - benefits whose size is conditioned on the current income of the individuals concerned. If access to actuarially reduced OAS and C/QPP benefits were made available from, say, age 60, after a few years, GIS payments to those 65 and over would be permanently higher

than would otherwise be the case.(7) An apparently costless change to the system would, therefore, turn out to be far from costless. The current system should thus remain as it is.

D. Conclusions

There are important financial and economic reasons to resist a generalized reduction in the age of entitlement to public pension benefits. A selective reduction to age 60 for those in ill health and chronically unemployed should be considered, recognizing the difficult administrative issues and important questions about the level of government that is the most appropriate to deal with the needs of this group.

It is difficult to justify an immediate change in the age of entitlement to public pensions beyond the current age of 65. But consideration should be given to the development of legislative criteria and procedures that would establish the circumstances in which such a change would be implemented.

A good case exists for providing more upward flexibility in the pension and retirement system. This can be encouraged by providing actuarially increased pensions, public and private, to those who defer receipt of benefits beyond age 65. Mandatory retirement provisions should be carefully scrutinized to see if they ought not to be relaxed, though no action should be taken on this point until the report of the Senate Committee has been received and evaluated.

(7)C/QPP benefits count as income for GIS purposes. With actuarial reductions for early retirement, the individuals concerned would receive lower C/QPP benefits, and hence, would be entitled to higher GIS payments when they reached age 65. OAS payments, on the other hand, are not counted as income for GIS purposes. Since, however, the OAS/GIS guarantee levels would be lower for a person with an actuarially reduced OAS pension, pressures would undoubtedly arise for a restoration of the guarantee levels. Costs then would also increase on this account. (A variation on this option, which would allow actuarially reduced benefits only if the individual can guarantee no future dependence on the GIS, would probably not advantage those who need the flexibility the most, i.e. those in ill health and those without good employer-sponsored plans.)

CHAPTER XVI

WOMEN AND PENSIONS

A. Introduction

Over the past several years the way in which the pension system treats women has been receiving increasing attention. A number of reports dealing specifically with this issue have been published.⁽¹⁾ These, together with the concerns expressed by women's groups and others, have underlined the particular problems that women face in the retirement income system.

Throughout the report, the effect of Canada's retirement income system on females has been noted. It was pointed out that a particularly large share of the poor among the elderly are women. The report has noted several reasons for this. One is that the income-tested pension programs provide less than adequate pensions to many of the elderly who are single and who live alone in unsubsidized rental accommodation. Women are disproportionately represented in this group. The second reason relates to two facts: the coverage of the employer-sponsored pension system is far from complete; and plan members are treated poorly unless they work for one employer for many years. Since women are less likely to be plan members than are men and since, if they do become members, women are less likely to have long uninterrupted work histories, they receive smaller pensions, on average, from the employer-sponsored pension system than do men. The third reason is that women are disproportionately represented in the group which spends most or all of their working lives outside the labour force as conventionally defined. Consequently, they receive little or no pension income from the Canada and Quebec Pension Plans (C/QPP). It is also the case that if the husband was a member of an employer-sponsored pension plan, the widow would likely not receive an adequate survivor's pension on his death.

This chapter highlights the implications for women of the various options for reform of the earnings-related pension system put forward earlier (Chapters VI-X) and of other suggestions set out in this report; and it reviews briefly other approaches for improving the position of women that have not been discussed up to this point in the report.

(1) For example, Kevin Collins, Women and Pensions, Canadian Council on Social Development, 1978 and Louise Dulude, Women and Aging: A Report on the Rest of our Lives, Advisory Council on the Status of Women, 1978.

B. The Report and Women

The reforms outlined in this report that would improve the retirement income system can be divided into those that affect earnings-related pension plans and those that affect the Old Age Security (OAS) and the Guaranteed Income Supplement (GIS).

1. Reforming Earnings-Related Pension Plans - Options 1 through 4.

a) Options 1 and 2. Of the four broad options for reforming earnings-related pension plans discussed in the report, the first two deal specifically with existing employer-sponsored pension plans. For reference, the principal measures associated with these two options are summarized below:

<u>Option 1</u>	<u>Option 2</u>
<u>Strengthening Current Arrangements in the Employer-Sponsored Pension System</u>	<u>Replacement of Defined Benefit Pension Plans by Defined Contribution Plans</u>
Maintenance of the real value of pensions and annuities-in-pay through indexing to 'inflationary earnings' or prices	Maintenance of the real value of pensions and annuities-in-pay through indexing to 'inflationary earnings' or prices
Earlier locked-in vesting	Immediate locked-in vesting
Updating of deferred pensions	
Early retirement provisions prohibited	
Compulsory survivor's pensions	Compulsory survivor's pensions
'Splitting' of pension credits on marriage breakdown	'Splitting' of pension credits on marriage breakdown

The adoption of the first listed measure - maintaining the real value of pensions and annuities-in-pay - would improve the position of those with pensions or annuities from employer-sponsored pension plans or personal savings. However, the fact that women, on average, live longer than men and are consequently more seriously affected by pensions or annuities whose value is fixed in money terms, indicates that the adoption of this measure would benefit women pensioners relatively more than their male counterparts. The same can be said of the next group of measures which deal with vesting, deferred pensions and early retirement provisions. These measures would all improve the position of those in the employer-sponsored pension system who are 'short service' employees, as compared with those who remain with one employer for many or all of their working years. Women are more likely to be in the short service employee group because, frequently, a certain amount of time is spent outside the labour force in the bearing and care of children and in homemaking. Furthermore, even during the period when they are in the

labour force, women generally move from employer to employer more frequently than do men. Given these labour force characteristics, the earlier vesting of pensions and the updating of deferred pensions would also benefit women relatively more than men.(2)

b) Earnings-Related Pensions and the Family. The last two listed measures under Options 1 and 2 - compulsory survivor's pensions and the splitting of pension credits on marriage breakdown - raise a different kind of issue: should the terms of pension plans be required to take account of the fact that most pension plan members are married and, if so, how?

There appear to be two general approaches to this question - what might be referred to as the individual and the family approaches.

Under a strict individual approach, marital status would be ignored in pension plan design. Pensions would be paid only to the members of plans and no provision would be made for survivors. One-earner couples could, of course, make their own provision for the continuation of a pension to the survivor, but this would be at their choice and would entail a smaller initial pension to reflect the fact that two lives were involved. This approach ensures that single and married plan members are treated equally; it also simplifies administration.(3)

Under the family approach, marriage would be explicitly recognized in plan design. Provision for survivors would be required and, in the case of marriage breakdown, pension credits accumulated during the period of the marriage would be divided between the partners.

The choice between the approaches depends on the extent to which married women participate in the labour force (as conventionally defined) and whether or not it is judged that pension plans should be required to explicitly recognize the 'economic partnership' aspect of marriage.

The judgment adopted here is that the family approach provides a sounder basis for the reform of the retirement income system at this time. Unless and until the rates of labour force participation and remuneration of married females are similar to those of their male counterparts, the individual approach involves the risk that there will continue to be many poor female survivors well into the future. Compulsory survivorship provisions deal directly with this point. The proposed splitting provision corresponds with the recent trend in family law

- (2) The issue of unisex annuity tables is raised directly by Option 2 since, under it, all retirement income from employer-sponsored plans would be in the form of annuities. The question of whether the use of different annuity tables for males and females constitutes discrimination under the Canadian Human Rights Act and several similar provincial statutes has been under active review by the Federal Human Rights Commission and some provincial commissions.
- (3) A report submitted to the Quebec government in 1977 recommends a much reduced role for survivorship pensions in the Quebec Pension Plan (QPP) and may, therefore, be said to be adopting the individual approach. See La sécurité financière des personnes âgées au Québec, Rapport de COFIRENTES+, 1977.

under which family assets are considered as the joint property of the two spouses. The latter provision is also in line with the current C/QPP practice.

A difficulty with the family approach is that requiring survivor's pensions may be thought by some to discriminate against single people. However, since a very high proportion of Canadians marry and since marital status at death cannot be predicted, it seems reasonable to regard survivorship provisions as devices that pool the risks of an uncertain future marital status.

The adoption of the family approach provides the rationale lying behind the suggestions in the report that employer-sponsored plans be required to provide survivor's pensions, that the Canada Pension Plan (CPP) retirement pensions become survivor's pensions on the death of either spouse (rather than, as at present, only in the case of the death of the plan member), and that employer-sponsored pension credits be split on marriage breakdown.(4)

c) Pension Benefits: Allocation and Amount. The adoption of either of Option 1 or 2 would concentrate a higher proportion of the pension benefits of the employer-sponsored pension system in the hands of women. As the report notes earlier, however, the improvement in the allocation of benefits carries with it no guarantee that the aggregate amount of pension benefits would be judged adequate. Faced with the Option 1 or 2 requirements, most of which would involve extra costs, many employers may, for example, redesign their plans so that estimated pension costs remain at current levels. In some cases, this might well result in the establishment of basic pension benefit levels that would not maintain living standards even of long-service employees. Options 1 and 2 would have no effect on those employers who do not now offer plans. Moreover, their ranks would grow if some employers now offering plans terminated them rather than conform to new requirements. Thus, the adoption of Option 1 or 2 would bring about an improvement in the allocation of pension benefits, but the effect on the total amount of benefits-in-pay could well be negligible.

Options 3 and 4, enlarged mandatory plans, were designed as alternative methods of increasing the total amount of earnings-related pensions generated by the retirement income system. The size of the pensions in each of these options would more or less maintain the living standards of middle-income people including, in the case of Option 4, at least, those who worked part-time. Since the options also include the various allocational measures discussed above under Options 1 and 2, the implications of Options 3 and 4 for women are clear: their adoption would mean the maintenance of the pre-retirement living standards of intact couples who have incomes in the middle ranges and of survivors; the partners of broken marriages would have equal entitlement to the pension credits accrued during their marriage.

(4)The second of these suggestions would reduce the cost of the CPP.

The funds saved are approximately equal to the funds needed to increase the size of CPP survivor's pensions from 60 to 67% of retirement pensions; these would be paid after the death of the husband or wife.

2. The GIS and OAS. The report makes two principal suggestions regarding benefits paid under the Old Age Security Act. The adoption of each measure would improve the position of the elderly in general but, as in the case of the earnings-related pension measures, women would benefit more than men.

With respect to income-tested benefits, the report suggests that more benefits should flow to those GIS recipients who live alone in unsubsidized rental accommodation. Since unmarried female GIS recipients outnumber unmarried male recipients by more than three to one, it is likely that the extra funds would flow to women in a similar proportion.

The same comment applies, although with less force, to the suggestion that increases in the OAS and GIS be linked to increases in average wages and salaries. Since women constitute 57% of OAS recipients and 60% of GIS recipients, these improvements in the OAS and GIS would, to a substantial extent, be concentrated in the hands of women.

C. Alternative Methods for Improving the Position of Elderly Women

While the adoption of any of the four options outlined above would improve the relative position of women, these options are by no means a complete list of measures that would have this effect. This section lists some additional alternatives. The first would not increase the total amount of pensions paid but would change their allocation between women and men. The second would increase the size of the pension system to one degree or another with most of the increment likely concentrated in the hands of women. The remaining measures could involve substantial increases in amount, as well as important changes in allocation.

1. General Splitting. General splitting refers to the practice under which half of a married person's accrued pension benefits are credited to his/her spouse as the credits are earned. For example, a woman working in the home would be credited with one-half of the pension entitlement earned by her husband for each year they were married; the husband would be credited with the other half. If both the woman and the man had earned income, each would be credited with one-half of the other's pension entitlements earned that year. This proposal received attention during the debate that preceded the amendments to the C/QPP that provided for the more limited splitting of pension credits on marriage breakdown. The advocates of general splitting saw advantages in the more direct sense of entitlement that spouses would gain. The principal problem with general splitting arises in the case of one-earner couples where the sole earner is older than the non-earner. If the C/QPP provided for general splitting, the C/QPP pensions of such a couple would be half what they would be under current arrangements until the non-earning spouse reached age 65. The adoption of general splitting would also necessitate changes in the disability and survivorship features of those plans. The plan design changes required by general splitting would affect the aggregate amount of pensions-in-pay only slightly, but the allocation would change importantly. Around one-half of C/QPP pension income would flow to women - a much higher proportion than at present.

2. Voluntary Contributions to the C/QPP. In recent years, some groups have argued that those with no employment earnings should be allowed to contribute to the C/QPP on a voluntary basis. The proposal is seen as benefiting females in particular since many women work full time in the home but receive no pension entitlement in respect of such work. Permitting voluntary contributions to the C/QPP, it is argued, would enlarge the pension system and channel much of the increased benefits towards women.

There are two principal difficulties with this proposal. The first is that those who would be in a position to take the greatest advantage of such a provision would, in general, have higher incomes than those who did not, which would raise questions about the basic fairness of such an approach. A second difficulty stems from the fact that the introduction of voluntary contributions would tend to undermine the earnings-related character of the C/QPP. If those outside the conventionally defined labour force were permitted to contribute up to the level of the Year's Maximum Pensionable Earnings, it would be difficult to deny the same right to those already in the labour force and contributing to the C/QPP but whose earnings were below that maximum. If, to avoid this possibility, the spouse without earnings was allowed to contribute only up to the amount of the spouse's contributions, this would reinforce the point that families with middle incomes and over would benefit most.

3. Other Approaches to Improve the Treatment of Women Through Enlargement of the System. Other measures to improve the pension position of women that would involve an increase in the size of the pension system can be distinguished according to whether they are based on earnings-related or flat rate pensions.

a) Women and Earnings-Related Pensions. On the earnings-related side, in addition to the Option 3 and 4 approaches, two methods may be noted. One is to expand the drop-out provisions of the C/QPP. The other is to pay a pension to one spouse based on the earnings of the other.

The CPP now contains a general drop-out provision that applies to all participants. All earnings figures throughout the career are used in the calculation of the earnings base, subject to a provision which allows years of low earnings to a maximum of 15% of the 47-year total to be omitted from the pension calculation. The earnings-related pension system could be enlarged and the increment concentrated in the hands of women by expanding drop-out provisions for women generally or by allowing the years spent in certain non-paid activities to be dropped out of the CPP pension calculation (as in the case of the child-raising drop-out in the QPP). Apart from the difficulties with categorical drop-outs noted earlier in the report (see Chapter IV), a principal drawback of the drop-out approach is that it would have no effect on those who spend most or all of their working years out of the paid labour force.

An alternative approach that does not have this drawback is to pay pensions to spouses of plan members basing the spouse's pension on the member's earnings. The United States Social Security system has adopted this approach. While many homemakers would clearly benefit from such a measure, care must be taken in the design to ensure that working women who are accruing their own pensions are not unfairly treated in comparison to women who keep house. The adoption of this alternative in Canada would necessitate major changes in existing survivorship provisions. (While this approach is similar in some respects to general splitting, a decision to pay spouses pensions can also be used to enlarge a pension system, while the effect of general splitting is to divide a given aggregate amount of pension payments among spouses.)

b) Women and Flat Rate Pensions. Flat rate pensions can also be used to enlarge the pension system. If all other things were kept the same and Canada's flat rate pensions were enlarged, the public pension system would not only be larger but the allocation of pension benefits would also change.

Flat rate pensions can be increased in a number of ways. Three will be noted. The first method, and the one most familiar to Canadians, would be to increase the universal OAS pension. Since the size of the OAS payment is related only to length of residence and not to labour force participation or earnings level, an enlarged OAS would mean that a greater proportion of public pension benefits would be received by women.

Secondly, this concentration could be further increased by adding features to the OAS that would make its receipt conditional on activities in which women are more likely to engage. A higher OAS could, for example, be paid to those who did not participate in the C/QPP (or, each year of non-participation in the C/QPP could give rise to an entitlement to a small increase in OAS benefits). Women would receive the bulk of such benefits. A third alternative would be to increase the OAS benefit for women according to the number of children raised regardless of whether or not the women worked in the paid labour force during the child-raising period. (This provision is similar to the drop-out provision described above but has the additional feature of benefiting those who spend little or no time in the paid labour force.)

D. Conclusions

Since many of the deficiencies of the retirement income system bear particularly heavily on women, their correction would have an especially beneficial effect on them. This is clearly the case with respect to the suggested changes in the GIS. The adoption of Option 1 or 2 would allocate pension benefits from the employer-sponsored system more fairly and, generally speaking, would be of greater value to women as a group than to men.

Measures to enlarge the non income-tested part of the pension system can be classified according to whether the enlarged mandatory measures are earnings-related or flat rate. In Options 3 and 4, the report presents options based on enlarged earnings-related pensions. These, rather than enlarged flat rate pensions, were chosen for detailed

examination in this report. In this connection, it is relevant to note that, if implemented, Options 3 and 4 would displace a significant part of the employer-sponsored pension system, which is, itself, largely earnings-related.

For those who prefer to see a more redistributive retirement income system on a basis that is not income-tested, this could be readily implemented through an increase in the OAS pension. Such a change would be easy to understand and to implement.

Both the earnings-related and flat rate approaches to enlarging the mandatory pension system are workable. Value judgements will determine the choice. From the perspective of the effect of pensions on women, enlarged mandatory earnings-related pensions of the kind outlined would more or less maintain the living standards of women and men who were part of the middle-income group in the pre-retirement period, including those who survive a spouse and those whose marriages break down. An increase in flat rate pensions of the same aggregate size would not be as effective in maintaining living standards, but would be more redistributive.

CHAPTER XVII

OTHER ISSUES OF PUBLIC POLICY

This chapter discusses briefly the three issues listed below:

A. Design Problems in Public Pension Programs

- the situation of the unattached individual,
- the Spouse's Allowance (SPA), and
- provincial 'top-ups';

B. The Income Tax System and the Elderly; and

C. Disclosure Provisions in Employer-Sponsored Pension Plans.

A. Design Problems in Public Pension Programs

1. Relative Treatment of Singles and Couples. The relative treatment of couples and unattached individuals under flat rate and income-tested public pension programs poses a fundamental dilemma. There is almost universal agreement that two people living together can achieve a particular standard of living more cheaply than two people living apart. For example, in cities of 500,000 and over, the Statistics Canada low-income cut-off for one person is equal to 69% of that for two-person family units. The Canadian Council on Social Development and the Special Senate Committee on Poverty placed their poverty lines for one person at 60% of those for two-person units.⁽¹⁾ It is difficult, however, to set benefit levels that reflect these economies of scale in consumption without creating what are perceived to be inequities. If minimum income floors for unattached individuals were set at, say, 65% of those for couples, then couples might attempt to apply separately for benefits. If, in order to avoid this, minimum income floors for unattached individuals were set at or around 50% of the floor for couples, many unattached individuals would have very low standards of living.

(1) For a useful summary of data on poverty lines, see Donald M. Caskie, Canadian Fact Book on Poverty, 1979, Canadian Council on Social Development.

Minimum retirement income guarantees for those receiving benefits on the married basis are at, or close to, accepted poverty lines in provinces which supplement the Guaranteed Income Supplement (GIS) payment. The comparable minimum income guarantees for those receiving benefits on the single basis vary between 50% and about 54% of married rates (the variation depending on the details of provincial programs). Consequently, the levels of well-being of many unattached individuals, particularly those who rent accommodation and who do not receive housing assistance, are low relative to minimum income standards. It is doubtful, however, that the minimum single rate guarantees could rise much beyond, say, 55% of the guarantee level for couples without giving rise to criticisms of discrimination against couples.

While there is no easy way out of this dilemma, the present policy clearly creates difficulties for many elderly unattached individuals, particularly those without their own homes or without some form of assisted housing. Many who find themselves in these circumstances are elderly widows. Over time, with growing female labour force participation rates and with the maturation of the Canada and Quebec Pension Plans (C/QPP), these problems may become less acute. But for the present, and for the next decade at least, they are and will remain very serious.

Taking these considerations into account, further assistance to this particularly needy group among the elderly should be provided in a way that does not increase further the level of the single rate Old Age Security (OAS)/Guaranteed Income Supplement income guarantee relative to the married rate, which is now 54%. Instead, three other ways can be considered for achieving this objective, two of which are linked to the GIS.

One approach is a 'living alone allowance'. If single-rate GIS recipients who live alone in rented accommodation, without housing assistance, were to receive a living allowance, this would direct resources to those among the current elderly most in need. A variation on this approach would be to re-design the GIS to include a shelter cost component in all GIS payments, whether for singles or couples. Shelter costs would be defined as a percentage of rent and property taxes paid, up to some maximum, and be included in the GIS payment. Since the shelter cost per person of single elderly unsubsidized renters is higher than that of couples, resources would be directed to those most in need, in particular to the unattached among the elderly who rent accommodation on an unsubsidized basis. A third and quite distinct approach would involve a heavier commitment to income-tested public housing. This third approach could take longer to implement than the first two and, therefore, is not necessarily a substitute for them.

2. Spouse's Allowance. The SPA program provides income-tested retirement benefits to the spouse of an OAS/GIS recipient where that spouse is in the 60 to 64 age group. The program is designed to reduce the need for elderly, low-income couples to resort to social assistance in cases where only one spouse is over 65.

In filling this need, the SPA has created other difficulties. It discriminates between people aged 60 to 64 on the basis of marital status. While married people 60 to 64 with spouses over the age of 65 are eligible for benefits, single people in that age bracket and married couples with both spouses aged 60 to 64 are not, even if their needs are identical. Also, if the spouse aged 65 or over dies, his or her OAS/GIS benefits are discontinued and the surviving spouse also loses the Spouse's Allowance six months later.

Four possible courses of action that would have the effect of eliminating the inequities created by the SPA are:

- introduction of a guaranteed income for the entire population, regardless of age;
- reducing the age of entitlement to all public pensions to 60;
- making GIS alone available at age 60; and
- gradually phasing out the SPA.

The question of a guaranteed income for all is beyond the scope of this study. The second alternative - providing public pensions at age 60 - would raise federal expenditures substantially (as indeed would the first). Moreover, over the long run, it might well cause the average age of retirement to drop significantly, reducing the tax base that finances the pensions. These points were noted in Chapter XV, where this alternative was rejected. The third alternative of making GIS only available at age 60 could easily constitute a step toward entitlement to all public pensions at age 60. Even if that result were not intended, pressure to broaden such a measure to include the OAS and the C/QPP would be strong.

If it were decided to move toward a widely based guaranteed annual income program, to reduce the age of entitlement to public pension program benefits, or to reduce the age of entitlement to income-tested pension benefits, then the continued existence of the SPA could well be considered to be in keeping with any such objectives. If none of these intentions exists, then consideration could be given to gradually phasing out the SPA, in the expectation that this gap would be filled by social assistance.

In the event that this latter course is also rejected, the implication is that a decision will have been taken to accept inequities in one form or other. If the retirement income system were reformed to generate more adequate incomes for those over 65, the magnitude of inequities created by the SPA program would eventually be much reduced.

3. Provincial Top-Ups. As noted earlier in this report, in recent years, six provincial governments have established programs for the elderly that supplement the GIS.

Although these top-ups lead to differences in the treatment of pensioners amongst provinces, these variations are not necessarily inappropriate. Indeed, it would be difficult to argue that financial needs are the same in rural areas as they are in metropolitan centres.

One effect of these top-up programs, however, is that they result in benefit offsets of 100%, or close to 100%, in the case of elderly citizens with some private income. Another is that singles tend to fare relatively badly as compared to couples in the sense described earlier in this chapter. These disadvantages associated with the income support system for the elderly need attention.

One possibility is for the provinces with top-ups to reduce their benefit offset or tax-back rates, and to alter the single/married rates so that a single person would receive somewhat more than half of the amount received by a couple. If the benefit offset were reduced, of course, this would add to provincial expenditures.

An alternative approach is for the federal government to provide a higher OAS/GIS income guarantee level. In the likely event that provinces reduced supplements, the range of other income subjected to the very high tax-back rates would then be reduced. Provinces could still, of course, configure their single/couple top-up rates so that those on single rates received half of what couples received, but fewer people would be affected. Increasing OAS/GIS guarantee lines would, however, be costly to the federal government. A variation of this approach is for the federal government to reduce its benefit offset rate. This too would be costly unless accompanied by a reduction in the basic support level.

As the C/QPP mature, reliance on income-tested programs will decline, easing the current difficulties. The adoption of an enlarged, mandatory earnings-related pension system would, of course, further reduce reliance on income-tested programs. Barring a larger federal role in income-tested programs, however, there is no obvious course of action for the federal government that would eliminate the present difficulties.

B. The Income Tax System and the Elderly

1. Income Tax Provisions Affecting the Elderly. A number of income tax provisions relate specifically to the elderly or to income sources available to many of the elderly. These provisions can be divided into four categories:

- the provision directed to those age 65 and over that specifically provides an exemption from taxable income on account of age - the age exemption;
- provisions giving incentives to save for retirement through registered retirement income plans, e.g. Registered Pension Plans (RPPs) and Registered Retirement Savings Plans (RRSPs);

- provisions intended to mitigate the effects of inflation on savings - the \$1,000 pension income deduction and the \$1,000 interest/dividend/taxable capital gains deduction; and
- miscellaneous provisions - for example the transferability between spouses of unused portions of the age exemption and of the pension and interest deductions.

With the maturation of the C/QPP and the increasing proportion of the elderly in the population, government revenue forgone as a result of these provisions will likely grow relatively rapidly.

The age exemption applies only to those age 65 and over. Revenue forgone as a result of the age exemption is roughly equivalent to 3% of expenditures on OAS/GIS. In the future, the relative importance of the age exemption will be affected by two opposing forces. On the one hand, if the OAS/GIS guarantee level rises more or less in line with average wages and salaries, and the age exemption remains indexed to prices, the age exemption would be expected to decline in value relative to the OAS/GIS. On the other hand, as replacement income becomes more important (especially with the maturation of the C/QPP), the value of the age exemption may be expected to rise. On balance, by around the year 2000, the revenue forgone by the age exemption might, at most, rise to double the 3% of OAS/GIS expenditures mentioned above.

The age exemption reduces the degree of redistribution of the retirement income system. However, during periods of high rates of inflation, as at present, this exemption also has the effect of reducing the inflationary erosion of the non-pension savings of the elderly (whereby, in effect, capital held in the form of financial assets is effectively taxed). Unless and until the tax system operates so as to avoid this result, no major change in the age exemption would appear necessary, bearing in mind that the retirement income system is already substantially redistributive.

The incentives in the tax system for retirement saving were discussed in Chapter XIV. No additional considerations arise here.

If steps are taken to maintain real pension values along the lines set out in Chapter IX, the \$1,000 pension deduction will become redundant. Therefore, in conjunction with the other measures outlined, an appropriate reform package would include the phasing out of this tax deduction.

2. The Possibility of Delivering Pension Benefits through the Tax System. It would be possible to provide the equivalent of OAS and GIS benefits, as well as the age exemption, by means of a credit delivered through the income tax system. Such a credit could be designed to have any of a wide range of budgetary and redistributive impacts. The real question here, however, is whether such a credit would offer any significant advantages. From an administrative perspective, gains would be negligible

at best. Monthly cheque delivery and mechanisms to take account of sudden changes in the economic circumstances of the elderly would still be required. From an accounting perspective, switching the OAS and GIS into a refundable tax credit would, in the first instance, significantly reduce government expenditures. However, the growing awareness of the role of 'tax expenditures' suggests that it would be widely perceived that the accounting 'saving' was spurious. The main potential of such a credit would lie in effecting some change in the distributional impact of the OAS, the GIS, and the age exemption. But any changes in the distributional impact of the existing programs could equally well be achieved by changing the programs themselves. Accordingly, the argument for a refundable tax credit as the principal vehicle for the delivery of OAS-and GIS-like payments to the elderly is not strong.

C. Disclosure Provisions in Employer-Sponsored Pension Plans

The terms, conditions, and financial position (past and present) of individual employer-sponsored pension plans are, broadly speaking, of interest to four groups - the sponsoring employers, the plan participants (and their agents), the regulatory authorities, and the public at large. A question of policy arises with respect to the nature of information that should be available to the last three of these groups. This section deals only with access to such information for the first group - the plan participants.

In general, two questions need consideration in any discussion of the pension plan information to be disclosed to plan participants: the nature of the information and the terms on which it should be made available. In principle, policy should aim at ensuring that all relevant information is readily disclosed. In order to minimize confusion and employer costs, decisions must be made, however, concerning the kinds of information that should be placed automatically in the hands of participants (and with what frequency), and the kinds of information that would be made available by the employer, or by the regulatory authority upon request.

Plan information of interest to participants may be divided into four categories:

1. Information on the terms and conditions of the plan, together with supplementary information on changes in the terms and conditions of the plan as they occur. This information is obviously basic. It must already be disseminated to all participants in the jurisdictions where pension benefits standards legislation has been enacted. Extending this requirement to employees who are, or who will become eligible to become members, or who would be obliged upon meeting age and/or service standards to become members would be desirable.
2. Information on the member's personal status within the plan - his contributions (if any), his status with respect to vesting, and his accrued benefits, including those to which he would be entitled if he left the employer, or died at a particular time. This information is obviously important to individual members. Plans subject to the Quebec Supplemental Pension Plans Act (and plans in the United States) must now provide information of this kind; plans subject to most other Canadian pension benefits legislation do not face such requirements.

3. Information on the financial status of the pension plan, including its assets and liabilities, receipts and disbursements, a list of assets and their yields, and the funded status of the plan as at the date of its most recent actuarial report. While there are difficulties associated with the provision of some of this information, it is clearly in the interest of plan members that it be made available because the security of their pensions is related to the position of the fund.
4. Information on the current position of two other groups - those who have left the plan but have a deferred pension and those now receiving a pension. Information relating to these two groups is not now required. The argument that it should be made available rests simply on the fact that since some of the current members of a pension plan will one day be in one of these two groups, it is in the members' interest to have information available on the position of these groups. Information could be provided on the sum of pensions-in-pay by broad age groups, based on their initial values, their initial values in current dollars, and their current values.

Most of this information could likely be provided quite readily (although not all is relevant to all types of plans). There is, however, a special difficulty regarding information on the funded status of pension plans. Funded status is determined by actuarial calculations, and depends on the valuation methods employed (on both the asset and liability sides), the assumptions used, the frequency of plan improvements, the age of the plan and other detailed technical matters. Interpreting the significance of such information is difficult. Comparisons with what appear to be similar numbers from other plans may be very misleading. While these comments argue against making the actuarial report or even an abstract of it available to participants, there may be a way to satisfy participants' legitimate concerns and to avoid confusion. Pension plans could be required to reveal their 'termination status' to plan members if deficiencies existed on this basis. Under this arrangement, plan sponsors would be required to reveal the value of a plan's liabilities calculated on a termination basis if these exceeded the value of the plan's assets calculated on a market basis (with the valuation guidelines, in each case, established by the regulatory authorities).

Since the provision of information is not without cost, care must be taken to ensure that regulatory requirements are not unduly burdensome for employers and regulators, and that the need to respond to frivolous enquiries is avoided. The first category of information mentioned above should be provided to all plan members (actual and potential). The second category of information - on the members' personal plan status - should be automatically made available to each plan member (including those with deferred pensions) every three years and whenever his status changes, i.e. on achieving vested status, on termination and on retirement. Since the frequent provision of the financial information cited under the third category could involve significant employer expenses,

it is probably sufficient to require that it be disclosed to those employees requesting it not more than once every three years. Employers, however, should be required to notify employees of the availability of such information and of their right to it upon request. Finally, the information on the status of pensioners and those with deferred pensions might also be made available automatically to participants every three years.

CHAPTER XVIII

FEDERAL-PROVINCIAL RELATIONS CONSIDERATIONS

Chapters III and IV outlined the scope and degree of both federal and provincial government involvement in the development, operation and regulation of the retirement income system. In the subsequent discussion of policy options for reform, it was indicated that a large measure of consultation and cooperation between governments would be needed if a uniform nationwide pension system were to remain intact.

This chapter discusses the type of federal-provincial cooperation that would be needed in respect of each of the four broad options for reform in the light of the existing constitutional setting for pension legislation in Canada. It also comments briefly on the overlap of federal and provincial governments in the area of income-tested programs.

A. Introduction: The Setting

The federal government has important powers in relation to the pension system. Parliament may amend the Old Age Security Act provided that the amended Act does not, in the words of section 94A of the British North America Act, "affect the operation of any law present or future of a provincial legislature in relation to old age pensions". No similar qualification applies to Parliament's right to amend those provisions of the Income Tax Act that make available tax deductions for employer-sponsored pension plans and other forms of retirement saving.⁽¹⁾ The federal government can also exercise leadership in pension matters through the pension arrangements it offers to its employees and the employees of its Crown corporations and through the Pension Benefits Standards Act, which regulates those employer-sponsored pension plans subject to federal jurisdiction, including some of the country's largest pension plans (e.g. those of the railways and the banks).

Important powers rest also with the provinces. Provincial pension benefits standards legislation establishes the supervisory environment for a large majority of the employer-sponsored pension plans in Canada. Provinces are also able to influence the circumstances of the elderly through their income-tested top-up arrangements, through

(1) Provinces can, of course, collect their own income tax. Quebec does so for personal and corporation taxes; Ontario for corporation taxes. This means that provinces that collect their own income tax now, or that do so in the future, could readily alter provincial tax assistance to pension plans as they see fit.

housing and health subsidy programs, and through tax credits. They too can exercise leadership through the plans they operate for their own employees and for those in their para-public sector, such as teachers and employees of publicly-owned utilities.

The Canada Pension Plan (CPP) is the only program in the retirement income system in which legislative power is effectively shared between the provinces and the federal government. A federal-provincial consensus is required to implement substantial amendments. Although the CPP is an Act of Parliament and the federal government must obviously concur in any change, two-thirds of the ten provinces having two-thirds of the total population must also concur. This gives the Government of Ontario an effective veto power.

The Government of Quebec also has a powerful voice in these matters. This is partly related to the fact that some persons employed in Quebec contribute to the CPP rather than the Quebec Pension Plan (QPP) (notably members of the Canadian Armed Forces and the Royal Canadian Mounted Police). Quebec is one of the ten provinces whose vote is weighed in deciding on amendments to the CPP. Furthermore, as significant weight is attached to maintaining a uniform nationwide public earnings-related program, the Government of Quebec also has an important indirect influence on the CPP. This is because Quebec can amend the QPP without reference to either the federal government or other provincial governments. Therefore, if the Quebec authorities were to wish to make changes to the QPP of a type that others did not wish to make in respect of the CPP, or vice versa, it would become essential to seek some form of compromise in order to preserve the nationwide character of the C/QPP system.

If the QPP or CPP were amended so that the two were no longer basically comparable, the detailed arrangements for portability of pension credits between the QPP and the CPP would be jeopardized. If the arrangements could not be renegotiated, this could have adverse consequences for many members of both plans. The agreement whereby most types of employment under federal jurisdiction in Quebec are covered by the QPP would also be subject to termination. In addition, a question would arise about the possible operation of the CPP in Quebec on the same basis as in other provinces. Thus, the need for consultation and cooperation between all governments concerned is obvious.

All provinces have the power to establish public pension plans of their own. Under the terms of the CPP, with three years' notice, a new provincial plan comparable to the CPP would effectively displace the CPP in respect of employment under provincial jurisdiction; and, if there were federal-provincial agreement, the provincial plan would also apply to employment under federal jurisdiction. The legal power of the provinces to act in this way testifies further to the importance of federal-provincial consensus.

Provincial governments obviously have a large interest in the financing arrangements for the CPP. The CPP has been an important source of capital for the provinces, although the net cash flow to the provinces from the CPP has been falling gradually for several years. If

contribution rates remain at their present level, it is estimated that interest payments on outstanding loans would start to exceed the amount of new funds available for borrowing by the mid-1980s and the fund would be exhausted around the turn of the century. As noted earlier, the Continuing Committee of Ministers of Finance and Provincial Treasurers has authorized officials to review the current CPP financing arrangements.

In view of the important federal and provincial powers in the area of retirement income noted above, it is not surprising that two of the principal pension developments of the last two decades have involved federal-provincial agreement. In respect of employer-sponsored pensions, it was acknowledged by the federal government that supervision of private pensions was properly within provincial authority, except in areas of employment subject to federal jurisdiction. This led to the enactment of pension benefits standards legislation by some provinces, beginning in the mid-1960s, and a similar federal law in 1967. In the second case, the provinces agreed, also in the mid-1960s, to constitutional amendments that allowed Parliament to pass the CPP.

B. Earnings-Related Programs

In considering reforms to the earnings-related parts of the pension system, two broad courses are theoretically open to the federal government.

1. Unilateral Federal Action. The federal government could unilaterally seek to implement major changes in the employer-sponsored segment of the earnings-related pension system, including those plans subject to provincial pension benefits standards legislation. This could presumably be done by changing the conditions for federal registration of employer-sponsored pension plans for income tax purposes (for example, by requiring particular vesting or indexing standards). An effort could be made to implement Options 1 and 2 (outlined in Chapters VI and VII) in this way. However, such action would be seen by the provinces as an attempt by the federal government to force its views on the provinces in an area where provincial jurisdiction seems generally to have been acknowledged since the federal-provincial understandings of the early 1960s.

2. Joint Federal-Provincial Action. The second course is based on joint federal and provincial action. It is suggested here that this course is the only practical one: long-run solutions to the problems raised in this report (including all of the broad options for reform of the pension benefits system that were set out earlier) require a federal-provincial consensus if any sort of reasonably uniform nationwide pension system is to remain in effect. If reform were to proceed along the lines of any of Options 1, 2 or 3, amendments to provincial and federal pension benefits standards laws would be required. If the amendments were to be uniform, as is highly desirable, this requires extensive consultation among the governments concerned and a willingness to compromise. Option 4 (set out in Chapter X) would involve an expansion of the CPP and QPP (perhaps with provision for contracting out); the legal requirement in the CPP for a federal-provincial consensus for changes to that statute has already been mentioned.

Amendments to federal and provincial pension benefits standards legislation would also be required in the case of the various government measures outlined in Chapter IX to facilitate the maintenance of real pension values. Federal-provincial consensus is essential if nation-wide measures are to be introduced.

C. Income-Tested Programs

As noted earlier, the area of income-tested programs for the elderly is one where both federal and provincial governments are involved. The combined effect of these programs is often to leave the elderly who have some resources of their own no better off than those with no private resources. While the scope of this problem would be narrowed significantly by an expansion of mandatory pension arrangements, difficulties are likely to remain in the absence of such a move.

Whatever course is followed for reforming the earnings-related pension system, some time will be needed to secure enactment of the required legislation in the various jurisdictions and more time will be required for the improved system to mature. Accordingly, the scope of the income-tested programs for the elderly could well remain large for some time - at least another decade and possibly longer.

Under the circumstances, there appear to be two possible courses of action. One would be for the federal government to withdraw from the area of income-tested programs. Three arguments might be advanced for this course. Firstly, because the provinces are already responsible for social assistance policies, maintaining an appropriate relationship between the assistance for the elderly and non-elderly might best be done by them. Secondly, and related to the first reason, income-tested programs ignore the fact that some applicants have assets, such as homes, which do not produce income but which nonetheless yield real benefits in terms of living standards. Provinces, with their field staffs, appear to be better placed to carry out more comprehensive testing to determine which of the elderly have the greatest needs, if greater selectivity were desired. Thirdly, because of the variations in needs and living costs from one province to another - and within individual provinces - a single Guaranteed Income Supplement rate for the entire country can mean that people with similar needs are treated differently, depending on where they live.

There are two main arguments against a complete federal withdrawal. Firstly, there is the notion that the federal government has an accepted role in maintaining minimum national standards for the elderly. Withdrawal from the field of income-tested programs would imply an abandonment of that role because Old Age Security benefits alone do not provide an adequate minimum income for the elderly; and without such a role, pensioners moving from one province to another could be subject to very large increases or decreases in income support because of variations in provincial programs. Secondly, withdrawal might run counter to any plans for a more broadly based federally-administered guaranteed annual income program.

With these considerations in mind, it would be desirable, in the context of the constitutional review which is in progress, to consider whether some better rationalization of federal and provincial pension programs and powers could not be achieved.

CHAPTER XIX

CONCLUSIONS

The retirement income system has adapted over the years to the changing structure of the Canadian society and economy. In the 19th century, some of the retired population provided for themselves out of personal saving. Those who had been unable to do so were generally looked after by their families, religious orders, or private charities. However, because life expectancy was much shorter than it is today and relatively few people actually experienced 'retirement', only a small share of the nation's resources was used by the retired population.

In the retirement income system of this earlier era, governments played a very small role in a system that was itself very small. Federal and provincial governments were uninvolved except to provide pensions to some of their own employees; and some municipal authorities provided assistance to those who were destitute.

With the industrialization of the later part of the 19th century, the structure of the economy began to change. An increasing share of the labour force moved from the family farm to the cities and towns where the new jobs were to be found, or to the hinterland where natural resources were being developed. With these changes in the economy there also came changes in social structure. The extended family began to weaken, as did the support it had been able to provide to family members who were unable, whether for reasons of age or health, to support themselves.

These changes in economic and social patterns were accompanied by other developments - increasing life expectancies and progressively longer retirement periods for rising proportions of the labour force. The share of national production required to support the retired population began to climb. Since the turn of the century, these changes have helped contribute to an estimated doubling of the share of national income consumed by the retired population; another doubling could easily occur within 50 years.

Some of the sources of retirement income that existed 50 and a 100 years ago continue in place today. The family obviously retains a role, though a relatively smaller one than in the past. Since the 19th century, the relative role of religious orders, charities and local authorities has probably declined even more than that of the family.

Personal saving, including saving in the form of homeownership, plays a significant role in supporting the well-being of today's elderly. Transfer payments from governments, however, are the major source of retirement income. Indeed, public pension programs now account for over half of the money incomes of those over the age of 65. Pensions from former employers have also come to play a relatively larger role than in earlier periods, though they remain substantially less important than government programs and personal saving. Thus, the retirement income system is much larger today than it was in the 19th century; and, in response to economic, social and demographic changes, the role of government in that system has become very much more important.

A. Public Policy

This report has examined the income situation of the elderly and the role of government in relation to it. Two main objectives appear to underlie the involvement of government in the retirement income system. The first is the alleviation of poverty among the elderly; the second is to help or require people to allocate appropriately their lifetime income, and hence consumption, between their pre-retirement and post-retirement years. This second objective is implemented through compulsory levies and transfers, through tax incentives to encourage employer-sponsored pension plans and private saving, and through legislation regulating employer-sponsored plans.

These two objectives do not define what is meant by 'alleviation of poverty', nor do they specify what is an 'appropriate allocation' of lifetime income and consumption. On the latter point, the report suggests an appropriate allocation of lifetime consumption is one that - by and large - enables people to maintain the same living standards after retirement as before. On the former, the report makes use of the several poverty lines that are commonly employed in this country.

There is an important link between these two objectives. If the pre-retirement living standards of middle-income families can be more or less maintained after retirement, either through personal saving, employer-sponsored pension plans or public pension plans that are not income-tested, then the income-tested programs designed to alleviate poverty will be concentrated mainly on those who had low incomes in their pre-retirement years - the mentally or physically disabled, the chronically unemployed and other disadvantaged groups. But if the living standards of those with middle incomes during their working years are not preserved after retirement, then the income-tested pension programs designed to alleviate poverty will continue to apply to many in this latter group.

1. Objective 1: Alleviation of Poverty. In considering the findings of this study, it is useful to distinguish between the current elderly (those now retired) and the future elderly (those not yet retired). With respect to the current elderly, the facts are straightforward. There is a very high correlation between being old and having a low income. The average after-tax income of those 65 and over is 40% of that of middle-aged families. With adjustments for wealth and for

family size, the economic position of those over 65 remains very substantially below that of middle-aged families. Among the elderly, there are more women than men; and among the single elderly women, incomes are about 15% lower, on average, than they are for single elderly men. Thus, many of the elderly are poor, and elderly women are, on average, poorer than elderly men.

The Old Age Security (OAS) and Guaranteed Income Supplement (GIS) benefits, in conjunction with supplementary programs in some provinces, establish the minimum level of income guaranteed to the elderly. Measured against the commonly used poverty lines, these minimum income guarantees are too low for single rate GIS recipients. The GIS is income-tested and thus takes no account of the non-income generating wealth of its recipients. Clearly, some GIS recipients do have such wealth, frequently in the form of mortgage-free homes. Thus, it is not necessarily the case that all single-rate GIS recipients have equal needs. Rather, it is those who live alone in rented accommodation without housing assistance whose living standards are generally the lowest. There are many elderly widows in this group. If additional resources are to be devoted to the elderly, and the case for such action appears strong, an effort should be made to channel it principally to those in this group. Two ways of achieving this quickly have been outlined in this report. One is a 'living alone' allowance that would be added to the single-rate GIS benefit for renters who do not share accommodation. Another is to redesign the GIS so that it has an explicit per capita shelter cost component. In either case, the effect would be to concentrate a higher proportion of GIS payments in the hands of elderly people most in need.

The effectiveness of public pension programs in alleviating poverty among the future elderly will be affected by the larger role to be played by the Canada and Quebec Pension Plans (C/QPP) and by the evolution of OAS and GIS benefit levels. If the present relationship of OAS and GIS to average wage and salary (AWS) levels is maintained, the combined benefits of the elderly of the future from these two programs and from the C/QPP would leave them better off, in comparison with the non-elderly, than is the case today. But if adjustments to OAS/GIS benefits in the years ahead reflect only increases in prices, and exclude real per capita economic growth, the gap between the per capita incomes of the elderly and non-elderly will likely be no smaller than it is today. Moreover, because poverty is essentially a relative phenomenon, if the guaranteed income provided through the GIS takes no account of per capita economic growth, increasing proportions of the elderly will fall below the poverty lines of the future.

2. Objective 2: Maintenance of Living Standards. The second objective of public policy is to help and/or require people to allocate appropriately their lifetime income between their labour force years and retirement years. The present heavy reliance of the elderly on the GIS (55% of OAS recipients), the large proportion of the elderly who have little or no replacement income (60% of those 65 and over reported less than \$1,000 in income from private pensions, investments and C/QPP in 1975), and data showing a sharp drop in the disposable incomes of middle-income

couples when they retire, all suggest that many of the current elderly experienced a serious decline in living standards when they retired.

The maturation of the C/QPP will increase the amount of retirement income available to the future elderly. But the C/QPP are only intended to replace 25% of pre-retirement earnings up to the level of AWS. Even assuming the OAS continues to play the same relative role in the future as it does now, the OAS and C/QPP together will not maintain the living standards of those who were middle-income earners during their working years. The maintenance of living standards of this group would require replacement income, in addition to the OAS, of between 40 and 45% of average lifetime earnings up to 1.5 times the level of AWS. Much of this will come from the C/QPP. But evidence suggests it is unlikely that sufficient income from investments and from employer-sponsored pension plans will be available to fill the gap between what the public programs provide and what is needed for the maintenance of living standards. It has been estimated that between one-third and one-half of the current working generation having incomes in the middle ranges will encounter significant reductions in living standards when they retire. On this basis, it is concluded that the system, as it is now constituted and expected to develop, will not generate adequate amounts of retirement income.

If the sources of replacement income were expanded, future generations of pensioners would be less likely to undergo significant reductions in living standards on retirement than is the case today. With such an expansion, there would also be a much smaller role for income-tested programs and hence relatively smaller expenditures out of the general revenues of government. Moreover, if the scope of income-tested programs could be narrowed so that the assistance they provided was concentrated almost entirely on those who had been needy in their pre-retirement years, the inequities created by such programs would be significantly diminished.

There is, of course, no way that those now of working age can be sure that their pension expectations will be completely fulfilled by future generations, whether paid for out of general revenues or earmarked pension funds. But if those now in their working years wish to maximize the likelihood that future generations of workers will honour pension promises, they need to act in two ways. Firstly, the working generation should treat those now retired in the way that they wish to be treated when they retire. Several ways of improving the situation of the current elderly have already been suggested. Secondly, whether or not there are planned increases in their own pensions, those now in the work force should monitor carefully the size and nature of the capital stock they are passing forward to future generations. Significant imbalances between the capital stock and the pension burden being passed on should be avoided, since one effect of such imbalances would be to reduce the probability that the pensions being promised will in fact be paid.

3. Allocation of Benefits in Earnings-Related Plans. Apart from deficiencies in the amount of replacement income, the allocation of benefits from earnings-related pension plans raises troubling questions. In employer-

sponsored plans, short-service employees, and those with interrupted careers, are treated badly. Delayed vesting provisions, inadequate adjustment of deferred pensions, the limited application of transfer-of-funds portability and of multi-employer plans, and plan provisions which enable long-service employees to retire before normal pensionable age on an unreduced pension, all have the effect of providing much higher 'returns' to long-service employees, for every dollar of pension contribution made by or in respect of them, than to short-service employees and to those with interrupted careers. Indeed, it can be reasonably argued that the latter group effectively subsidizes the former. Women generally, and low-income earners of either sex, are particularly likely to be hurt by these plan provisions.

The allocation of benefits, and the well-being of pensioners generally, are also influenced substantially by differences in plan design that stem mainly from the varying capacity of employers and employees to enhance, through their pension plans, the well-being of those who have retired. Where this capacity is slight (mainly among smaller and medium-size employers selling in highly competitive markets), employer-sponsored pension plans are likely to resemble group saving devices; where it is greater (mainly in the public sector and among some large corporations), pension plans are likely to involve direct transfers from one generation to another. In effect, some groups of employees are 'insured' against an uncertain future because of the taxing or market powers of their employers; a great many others do not have such insurance.

This difference manifests itself most clearly now in the 'indexing' issue. Some of the elderly have employed-sponsored pensions whose real value is more or less maintained. Most of those with such pensions worked for employers in the public sector or for one of a few larger private sector employers - employers who are able to bear the risks indexed pensions entail. Since most employers are unable to bear these risks, the result is that some pensioners are protected from inflation and others are not - an outcome that is clearly unfair. This report concludes that the incomes of all of the elderly need to be substantially protected against inflation.

Finally, three features of the retirement income system serve to allocate pension income between spouses in an inappropriate way. Current survivorship provisions in the C/QPP do not treat spouses equally; many employer-sponsored plans lack adequate benefits for survivors; and pension credits in employer-sponsored pension plans are not split on marriage breakdown. Women are more adversely affected by these deficiencies.

B. Options for Reform of the Earnings-Related System

There are serious problems in the earnings-related pension system relating both to the amount and to the allocation of pension benefits. Four broad approaches to reform - four options - were outlined. All four would improve the allocation of benefits in the following three ways: there would be more equal treatment between mobile employees (including those with interrupted careers) and those who are relatively

stable; real levels of retirement income would be more or less maintained; and there would be more equal treatment between plan members and their spouses. Two of the four options were also designed to increase the amount of pension payments for those now in the work force.

One result of the proposed changes is that women would be treated fairly. A second is that differences in treatment between employees and pensioners in the public sector and those in the private sector would be narrowed significantly, as would the differences between employees and pensioners associated with large private sector employers and those with small private sector employers.

It is worth restating the four options briefly.

Option 1: Strengthening Current Arrangements in the Employer-Sponsored System through legislation that would, among other things, provide for: earlier locked-in vesting; updating of the deferred pensions of terminated employees; substantial preservation of the real value of pensions and annuities-in-pay; splitting of pension credits on marriage breakdown; and compulsory post-retirement survivorship provisions. Coverage could be facilitated through provision for a Registered Employee Pension Fund (REPF).

Option 2: Replacement of Defined Benefit by Defined Contribution Plans would entail the compulsory phasing out of defined benefit plans. Where defined contribution plans were adopted, locked-in vesting would be full and immediate, real pension and annuity values would be substantially maintained, pension credits would be split on marriage breakdown, and post-retirement survivorship provisions would be required.

Option 3: Mandatory Standard Plans would require all employers, either individually or in groups, to offer one of the following:

- a) a standard defined benefit plan;
- b) a standard defined contribution plan; or
- c) a plan combining a) and b).

In each case, plans under Option 3 would have to meet certain specifications which would be similar to, but in some cases more stringent than, the conditions that would attach to Options 1 and 2.

Option 4: Larger Earnings-Related Public Pension Plans, which would replace much of the employer-sponsored system by providing benefits on a scale comparable to those in Option 3. A sub-option (4A) envisages the possibility of permitting employers who agreed to provide comparable benefits to 'contract out' of the enlarged C/QPP.

Parallel provincial and federal legislation would be needed to implement the first three options and a federal-provincial agreement would be required to act on the fourth.

Under the first three options, the real value of pensions would be more or less maintained by requiring that pensions be indexed either to prices or to inflationary earnings. In the event of a price indexing requirement, government assistance - in the form of a stabilization facility or real rate annuity facility - would be needed.

The four options do not constitute the only approaches to reform of the earnings-related pension system. It is thought, though, that they are broadly representative of the kinds of choices that Canadians, and their governments, must examine. The first two options would improve the allocation of pension benefits. The third and fourth options are aimed at increasing the amount of benefits as well as improving their allocation.

Whatever is decided about enlarging the pension system, reform should remove existing inequities in the allocation of pension benefits. Either Option 1 or Option 2 would meet that need. In addition, for members of defined benefit plans, Option 1 would generally ensure a reasonably close relationship between the value of the pension contributions made in their working years and the size of their retirement pension. As for Option 2, it is simpler than Option 1, both from the viewpoint of plan administration and ease of understanding for plan members.

If the employer-sponsored pension system were being started from scratch, the arguments for and against defined benefit plans and defined contributory plans as the basis for the new system would be nicely balanced. But phasing out the 8,000 defined benefit pension plans would require a long and complicated transition period, and would affect the 95% of all plan members who now belong to such plans. Accordingly, Option 1 may possibly find the greatest public acceptance. The cost of this option depends on many factors. For some employers - those who now offer early vesting, some post-retirement indexing and good survivorship provisions - the costs might be close to nil. For those with poor vesting provisions, who offer little or nothing in the way of indexing or survivorship provisions, added costs could range up to 6% of payroll, though most increases would be much smaller. Increases in cost could be shared between employer and employees.

A retirement income system reformed along the lines of Option 1 or 2 would still leave a very large question - perhaps the largest in the pension debate. Should all participants in the labour force be required to pay for bigger pension plans so that they can be sure of adequate retirement pensions? Even now there is a significant degree of compulsion in the earnings-related pension system. Some 10 million working members of the labour force pay into the C/QPP. Just over one-third of these 10 million labour force members also belong to employer-sponsored pension plans where plan membership is a condition of employment. These 3 1/2 million people are compelled to participate in employer-sponsored plans. Should a similar degree of compulsion be extended to the remaining 6 1/2 million people in the labour force?

Low-income earners, hard pressed to make ends meet on a current basis, should probably not be compelled to contribute in a substantial way to an enlarged pension system. Their contributions should either be subsidized, or they should be excluded from participation in any increment to the earnings-related system. Such measures would have little effect on their retirement incomes, given the role played by income-tested public programs.

As for those with middle incomes and above, some would probably object to larger compulsory pension contributions. But it may well be the case that many in those income classes, if they are now without adequate pension coverage, would readily make increased pension contributions in return for the opportunity to participate in an enlarged earnings-related pension of the type described under Options 3 or 4.

From the perspective of the adequacy of the current pension system, it has already been suggested that a powerful case exists for its expansion, along the lines of either Option 3 or Option 4. But, of course, this is not the only perspective from which the question can be viewed. Some people may consider that there is already too much government compulsion in the pension system and, indeed, in the economy generally.

The adoption of Option 3 or Option 4 would entail significant cost increases for some employers and their employees. An employee earning at the level of average wages and salaries, who is not a member of an employer-sponsored pension plan and not saving privately for retirement, now contributes and has contributed on his behalf some 2.3% of his earnings to the C/QPP. (The self-employed contribute the full amount themselves.) These C/QPP levies will roughly double when full cost contribution rates are being charged for these plans. An additional mandatory earnings-related component of the size discussed would, when fully phased in, require total contributions of some 11% of this employee's earnings - an increase of almost nine percentage points of his earnings over current levels. These increased costs are equivalent to some \$1,200 per year. Since they would be split between employer and employee, each would pay \$600 more annually. For an employee whose earnings are equivalent to 1.5 times AWS, the increased costs would be around \$1,000 for each of the employer and the employee. (These absolute dollar figures are based on 1977 wages and salaries.) As noted, these very large increases would apply to employers who do not now offer employer-sponsored pension plans and to their employees. Since a high proportion of small employers are in this category, the labour intensive nature of many such businesses compounds the cost concerns. While it is possible to develop means to shift a portion of the burden on to a different tax base, it has been assumed here that employers would pay for half of any enlargement to the earnings-related system and, thus, that small employers would incur a large part of the costs stipulated.

With an enlarged earnings-related mandatory pension system, there is thus an important concern about the cost impact on some employers and their employees. Without such a system, there is the prospect of

continued heavy reliance on income-tested programs financed out of general revenues. There is also the prospect of a continued dichotomy in treatment between employees and pensioners in the public sector (where pension coverage is complete) and those in the private sector (where only about half of full-time workers are covered).

As between Options 3 and 4, there are advantages from an administrative perspective, and to a lesser extent from a certainty of replacement income perspective, in Option 4. If Option 4 were selected, the possibility of contracting out should be considered seriously (Option 4A).

If there is a desire to act through private institutions, or a doubt that it would be possible to arrange for some significant proportion of CPP investments to be channelled through the capital market effectively, Option 3 could well be the more attractive approach from an economic perspective, although the institution of mandatory employer-sponsored plans would constitute a new approach to pension arrangements in Canada.

In summary, a fairer allocation of pension benefits would be achieved through measures along the lines of those specified under Options 1 or 2. In comparison to current arrangements, both would provide better portability, at least some measure of protection against inflation, and better treatment of spouses of plan members. A decision to expand the pension system along the lines of Options 3 or 4 involves important and difficult trade-offs which require public debate.

C. Age of Entitlement/Retirement Age

Whatever is decided about the appropriate size of the pension system for those 65 and over, it is evident that lowering the age of entitlement to public pensions from 65 to 60 would involve a cost increase of very substantial proportions. The view adopted here is that higher priority should be attached to ensuring adequate pensions for those 65 and over than to lowering the age of entitlement to public pensions. Concerns about the changing age structure of the population, and the possibility of further improvements in life expectancy, reinforce this conclusion.

Indeed, as the share of the elderly in the population grows, pressures may arise for increases in the age of entitlement to public pensions. Increases occurring on short notice would have the undesirable effect of disrupting the retirement plans of those who had counted on benefits being available at age 65. Increases decided upon far in advance may turn out to be ill-considered, because the demographic, economic or social projections on which the decisions are based may not be realized.

This dilemma indicates the need for advance planning. Thus, it is suggested that consideration be given to the development of legislative criteria and procedures that would forewarn Canadians of the circumstances in which such an increase in the age of entitlement would be implemented.

There also appears to be a good case for providing some upward flexibility in the age at which pension payments may be started. This can be encouraged by providing actuarially increased pensions - public and employer-sponsored - to those who defer receipt of benefits beyond age 65. In addition, mandatory retirement provisions should be carefully scrutinized to see if they ought not to be relaxed, though no action should be taken until the report of the Senate Committee on Retirement Age Policies has been received and evaluated.

D. Pensions and Women

Many women are treated poorly by the pension system. Within the earnings-related component, the problem varies depending on the labour force history of the woman. If she is a full-time participant in the labour force for most of her pre-retirement years, she may change jobs more often than a full-time male participant. In that case, she is more likely to be hurt by delayed vesting provisions, the lack of updating of deferred pensions and the lack of transfer-of-funds portability. If she works prior to raising a family, withdraws from the labour force while she raises a family, and subsequently returns to paid work, she will again be adversely affected by these same features in the pension system.

If the woman is a homemaker, she has no opportunity to participate in the C/QPP; and if her marriage has broken down, she generally has no automatic entitlement to any part of the benefits of any employer-sponsored pension which her husband earned during the period they were together. If there is no separation and if her husband dies before her, the survivor's pension provided under the employer plan will often be inadequate. She is also treated less well than her husband, in that she receives only a 60% C/QPP survivor pension if he pre-deceases her, whereas he would continue to receive the full C/QPP retirement pension if she dies first.

Options 1, 2 and 3 would eliminate these inequities, leading to fairer treatment of women. If C/QPP retirement pensions were reduced to a survivor's pension on the death of either spouse, that would also result in equal treatment of women and men. In all four options, the survivor's pension is set equal to two-thirds of the retirement pension.

If the implementation of Option 1 or 2 results in no change in the amount of resources flowing to the employer-sponsored pension system, the effect of these options would be to reallocate pension benefits; a good deal of the reallocation would be from men to women. This change would perhaps make more apparent a need for a larger retirement income system. Should this outcome be pursued under an Option 3 or 4 approach, an enlarged pension system with an improved allocation of benefits would be the result. Men and women who had incomes in the middle ranges before retirement would have their living standards more or less maintained in retirement. This same result would also apply, although with somewhat less consistency, to survivors and to those whose marriages had broken down.

E. Financing of Pensions

When the C/QPP were introduced in 1966, a decision was taken to levy a total contribution rate of 3.6% of pensionable earnings. Since this rate is well below that which would finance the benefits paid, the plans are usually referred to as being 'partially funded'. It was well understood in 1966 and since that C/QPP contribution rates would have to rise in the future. A federal-provincial committee of officials is now preparing a report on this matter for Finance Ministers who will soon be considering when and by how much contribution rates should rise.

An important question lies behind the debate concerning the extent to which the C/QPP should be 'funded'. Some regard no funding ('pay-as-you-go') or partial funding as a dangerous practice which will lead to the country's capital stock being smaller than otherwise. Their argument is that C/QPP contributors save less privately than they would if these plans did not exist and that this reduction in saving will not be restored unless the plans are 'fully funded'.

Over the last few years, there has been a substantial debate on this issue in the economic literature but no consensus has emerged. It is a fact, however, that aggregate savings rates have been relatively constant over many years and recent personal savings rates have exceeded the historical average. The tentative presumption expressed in this report is that the absence of full funding may be presumed to exert some downward effect on the size of the capital stock, but such an effect is not likely to be large.

It is principally because of this stated presumption that the report suggests that some measure of funding continues to be appropriate for the C/QPP as opposed to financing the two plans on a pay-as-you-go basis. A measure of funding also would reduce somewhat - though not to a large degree - the variations in contribution rates over time that, given the changes in the age structure of the population, would result from pay-as-you-go financing.

Various degrees of funding will result from different contribution rate paths. A large fund would be desired by those who attach substantial weight to the presumption that the capital stock may be affected adversely by unfunded public pensions. This view would call for a rapid phase-in of higher contribution rates. In that event, a substantial proportion of the fund should flow through the capital markets to maximize the probability of the funds being used for investment rather than for consumption.

But there is also a view that a fully funded CPP and fully funded QPP can create difficulties, disrupting capital markets and/or, if some or all of the funds remain captive to government, leading to a larger government sector than otherwise. Those with this view may consider it more appropriate to provide for a slower phase-in of increased contribution rates. The evidence available in this report, and its appendices, suggests that this second perspective should be given substantial weight.

Underlying the concern about C/QPP funding is a fear that future working generations will find that the wealth of the country is not great enough to enable them to pay for the pensions of the large number of elderly citizens. But the wealth of future generations will be determined by many factors; the funding of pension obligations is only one influence and its weight cannot be effectively measured. From the perspective of intergenerational equity, the factor that is crucial is that the size and quality of the capital stock being handed on to future generations - a capital stock consisting not only of buildings and factories but also of natural resources, knowledge and skills, and environment - be appropriate in relation to the liabilities, including pension liabilities, that are also being passed forward.

There are three issues of importance regarding the financing of employer-sponsored plans. One is that the security of benefits may be inadequate. A second is that less rigorous financing arrangements for employers in the public sector than for employers in the private sector currently make it relatively easier for the former to finance any given level of pension benefit. A third issue is that when pension contributions from public sector plans are captive to governments, the allocation of employer costs and of assets is distorted because the interest rates credited must necessarily be arbitrary.

The funded status of any plan, as determined on the so-called 'going concern' basis, reflects assumptions about future events. On a termination basis, it appears that plans are, on average, about 85% funded. The plans with the largest unfunded liabilities - the ones where benefits of members are on average most vulnerable - are flat benefit plans. In plans of that type, if there are updatings, wind-up will often result in some loss of benefits. Therefore, this report suggests the funding rules for flat benefit plans be reviewed in order to ensure better security of benefits.

From the viewpoint of security of benefits, it would also be helpful to establish statutory guidelines to provide more consistent treatment of pension funding and benefits in the case of mergers, acquisitions and plan wind-ups. In addition, a case can be made for granting plan members full creditor status where there are deficiencies on plan termination and in situations of corporation liquidation and bankruptcy.

The accounting format associated with the funding of private employer-sponsored plans should be followed by public sector employer plans. Concessional rates of interest available to the public employers who sponsor these plans should also be avoided. Public sector employers should be encouraged to invest through the market at least some significant part of the pension contributions now flowing to consolidated revenue funds. Of the several advantages to this approach, perhaps the most important is the more equal treatment between employees and employers in the private sector, and those in the public sector, that it entails.

ABBREVIATIONS

AWS	-	Average Wages and Salaries
CAPSA	-	Canadian Association of Pension Supervisory Authorities
CCSD	-	Canadian Council on Social Development
CLC	-	Canadian Labour Congress
CLIA	-	Canadian Life Insurance Association
CPI	-	Consumer Price Index
CPP	-	Canada Pension Plan
C/QPP	-	The Canada and Quebec Pension Plans
DPSP	-	Deferred Profit Sharing Plan
EPSP	-	Employees Profit Sharing Plan
ERISA	-	Employees' Retirement Income Security Act (of the U.S.A.)
GAINS	-	Guaranteed Annual Income Supplement (of the Province of Ontario)
GIS	-	Guaranteed Income Supplement provided under the Old Age Security Act
GNE	-	Gross National Expenditure
GNP	-	Gross National Product
OAS	-	Old Age Security (depending on the context OAS refers to the Old Age Security Act or benefits under it)
PBSA	-	Pension Benefits Standards Act (which applies to pension plans in employment under federal jurisdiction)
PSSA	-	Public Service Superannuation Act (which provides unindexed or basic benefits to federal public service employees)
PSSA/SRBA-		The combination of the PSSA and SRBA (see below)

QPP	-	Quebec Pension Plan
REPF	-	Registered Employee Pension Fund
RHOSP	-	Registered Home Ownership Savings Plan (under the Income Tax Act)
RPP	-	Registered Pension Plan (under the Income Tax Act)
RRIF	-	Registered Retirement Income Fund (under the Income Tax Act)
RRSP	-	Registered Retirement Savings Plan (under the Income Tax Act)
SPA	-	Spouse's Allowance provided under the Old Age Security Act
SRBA	-	Supplementary Retirement Benefits Act (which provides for increases to basic pensions under the various federal public service plans for judges, Members of Parliament, the military, public service employees, RCMP, etc.)
UAW	-	United Automobile Workers
UIC	-	Unemployment Insurance Commission (depending on the context UIC refers to premiums or benefits under the Unemployment Insurance Act)
YBE	-	Year's Basic Exemption (of earnings for contribution purposes under the C/QPP)
YMPE	-	Year's Maximum Pensionable Earnings (for contributions and benefit calculation purposes under the C/QPP).

GLOSSARY OF EXPRESSIONS USED IN THIS REPORT

Actuarial Assumptions - Factors which enter into the calculations of pension costs, e.g. mortality rates, employee turnover, salary levels, investment earnings, etc.

Ad Hoc Adjustments - Adjustments of pensions-in-pay or of accrued benefits on an irregular, non-contractual basis.

Age Distribution - A classification of individuals according to their ages, such as the numbers of males aged 20 to 24, 25 to 29, etc.

Annuity - A payment of money under a contract commencing at a predetermined time or event and made annually or at more frequent intervals, either during the continuance of a given life or a combination of lives, or for a specified number of years.

Average Wages and Salaries (AWS) - Average earnings for the Industrial Composite as measured by Statistics Canada and reported in catalogue 72-002 Employment, Earnings and Hours. The Industrial Composite does not cover all employment. Firstly, only firms hiring 20 or more employees in any month of the year are included in the survey. Secondly, agriculture, fishing, trapping, non-commercial services, and public administration and defence are not covered. In 1976, the Industrial Composite was estimated by Statistics Canada to cover some 53% of total estimated employment.

Benefit - A general term applied to any form of payment which may be made to a person under the terms of a pension plan, depending on the circumstances.

Benefit Formula - A provision in a pension plan which establishes the method whereby the amount of an employee's pension is to be calculated, the amount being determined by multiplying either some fraction of the employee's earnings, or a fixed dollar amount, by the years of service under the employer's pension plan. For examples see Unit Benefit, Career Average, Flat Benefit and Final Average Formulae; see also Defined Benefit and Money Purchase Plans.

Best Average Benefit Formula - A benefit formula where the earnings component is the average level of earnings during a certain number of the highest paid years.

Career Average Benefit Formula - A benefit formula where the earnings component is an employee's average earnings during the whole period of his coverage under the plan. For example, the pension might be one-fiftieth of each year's earnings (i.e. 2% of his average earnings over all the years of coverage under the plan multiplied by the number of years of service).

Cash Withdrawal (Return of Contributions) - The taking of a refund of his contributions by an employee whose membership in a contributory pension plan has terminated.

COFIRENTES + - Comité d'étude sur le financement du Régime de rentes du Québec et sur les régimes supplémentaires de rentes. The pension review committee appointed by the Government of Québec. The committee's report was made public on March 14, 1978.

Compulsory Plan - A pension plan which eligible employees must join as a condition of employment.

Consolidated Revenue Fund Pension Plan - A plan under which contributions are paid into, and benefits are paid out of, the Consolidated Revenue Fund of a government with no external investment of the funds being made, although the use of the contributions by the sponsoring government may involve the recording of them as debt and the payment of interest on that debt.

Contributory Pension Plan - A pension plan under which both the employees and their employer make contributions. The employees' contributions are usually related to their earnings.

Current Service - Service by an employee as a member of a pension plan, which service is performed after the employee has become a member of that plan and is counted as service for the purpose of that plan.

Death Benefit - When applied to a pension plan, the sum of money paid in the event that a member of the pension plan dies before his pension has commenced.

Death Rate - See Mortality Rate.

Deferred Annuity or Deferred Pension - A life annuity payable at some future date to an employee whose membership in a pension plan has terminated before the normal pensionable age (often age 65) of the plan. Payments usually commence when the former employee reaches that normal pensionable age.

Deferred Profit Sharing Plan - A profit sharing plan under which the employer contributions are deductible under the Income Tax Act but are not taxable in the hands of the employee until they are received.

The employees may or may not contribute but, if they do, their contributions are not deductible under the Income Tax Act. A DPSP is commonly used as a money purchase pension plan.

Deferred Retirement - Retirement at a time later than the normal retirement age under a pension plan.

Deferred Vesting - See Delayed Vesting.

Defined Benefit Formula - A generic term for any benefit formula which specifies, for a given level of income and period of service, the amount of pension that may become payable. See Defined Benefit Plan for an example. Career Average Benefit, Flat Benefit, Best and Final Average Benefit Formulae are all of the defined benefit type.

Defined Benefit Plan - A pension plan which provides a pension whose amount is determined by a Defined Benefit Formula. An example of such a plan is a Final Average Plan where the pension is equal to the number of years of service, up to 35, multiplied by 2% of the employee's average salary over the last five years of service (i.e. a maximum pension of 70% of average salary over the last five years of service).

Defined Contribution Plan - A pension plan in which there is an undertaking to set aside funds on a specified basis (such as 5% of pay). Contributions may be made by the employer and employees or by the employer alone. The amount of the pension payable is determined by the size of the capital sum available in respect of an employee when his pension is purchased. The size of the capital sum in turn reflects the pension contributions made by and in respect of the employee and the income which the contributions are deemed to have earned.

Delayed Vesting - Occurs when the employee does not gain a claim to the benefits accrued to the employee under the benefit formula until he has met some requirement, usually a prescribed period of service as a member of a plan, or attainment of a certain age, or both. See Vesting.

Demogrant - A benefit payment under a benefit system covering the entire population with eligibility for benefits being determined on demographic criteria such as age, residence, etc., but not dependent on income either before or after the age of entitlement. For example, the basic benefits payable under the Old Age Security Act are demogranants.

Early or Special Retirement Provision - A provision in a pension plan under which a long service employee may retire with an unreduced pension before the normal pensionable age in the plan. An example of this is a provision which permits an employee with 30 years of pensionable service to retire after attaining age 55 under a plan with a normal pensionable age of 60.

Employees Profit Sharing Plan (EPSP) - A profit sharing plan under which employer contributions are deductible for income tax purposes by the employer and declared as income by the employee. Employee contributions are permitted but are not tax deductible. Payments out of the fund are generally tax free.

Employer-Sponsored Plans - All pension plans offered by employers, whether in the private sector or the public sector, including governments, government agencies, etc. (In order that the plans may be registered for income tax purposes, employers must make contributions to such plans). Although all "employer-sponsored pension plans" are not "Registered Pension Plans", the report uses the terms interchangeably.

Excess Earnings - See Inflationary Earnings.

Expectation of Life - The estimate of the expected number of years of life remaining to a person who attains a particular year of age, according to a particular mortality table.

Experience Deficiency - A deficiency in the assets of a pension plan at the effective date of an actuarial review which is attributable to differences between the actuarial assumptions as to future experience decided on at the time of the preceding actuarial review and the actual experience in respect of those assumptions between the two reviews.

Final Average Benefit Formula - A benefit formula where the earnings taken into account are the average level of earnings in the last few years before retirement. The number of years used in calculating the average varies, usually in the range from three to ten years. See also Final Earnings Benefit Formula.

Final Earnings Benefit Formula - A benefit formula where the earnings taken into account are those in the pay period (usually a year) immediately before retirement. See Final Average Benefit Formula.

Fixed Benefit - A pension whose amount is not increased for longer service or larger income. Usually payable only to those with a minimum period of service. A minimum pension resembles a fixed benefit.

Flat Benefit Formula - A benefit formula which provides a fixed (or flat) amount of pension for each period such as a month's or year's service, irrespective of the level of earnings of a plan member.

Full Maintenance of Pre-Retirement Living Standards - The condition when the discounted value of consumption in the first year of retirement made possible from pension and investment income (less income taxes and savings, if any) equals Pre-Retirement Consumption. See Pre-Retirement Consumption.

- Full Vesting - The employee's right to the benefits attributable to all benefits accrued under the benefit formula, on termination of employment before retirement, usually in the form of a deferred pension payable at normal pensionable age, as distinct from Partial Vesting and Graded Vesting. See Vesting.
- Fully Funded - When applied to a pension plan, means a pension plan that at any particular time has sufficient assets to provide for the payment of all pension and other benefits required to be paid under the terms of the plan in respect of service rendered by employees and former employees prior to that time.
- Funding - Involves the orderly accumulation of assets, during the working lifetime of a group of employees which, together with the earnings of the assets, are expected to provide all pension, death and other benefits in respect of that group as they become payable in the future. See Consolidated Revenue Fund Pension Plan, Insured Pension Plan, Trusteed Pension Plan.
- Funding or Funded Ratio - The ratio of the assets in a pension fund to the total liabilities of that fund.
- Going Concern - When applied in relation to a pension plan, etc., means that the plan is not expected to be terminated or wound-up for an indefinite period of time.
- Guaranteed Annuity - An annuity which will be paid for a specified period of time in any event and after that period for as long as the annuitant lives, e.g. under an annuity of \$2,000 guaranteed for five years where, if the annuitant dies after three years, the annuity will continue to be payable to a beneficiary for two years.
- Income-Tested Pension Plan - A public pension plan whose benefit payments are lower the higher the income of the recipient, e.g. the Guaranteed Income Supplement payable under the Old Age Security Act.
- Indexing - The automatic adjusting of pensions-in-pay, or accrued pension benefits, in accordance with changes in an index such as the Consumer Price Index. This is to be distinguished from Ad Hoc Adjustments.
- Inflationary Earnings - That portion of the return earned on the investment portfolio of a pension fund that is in excess of the rate of return assumed in the absence of inflation.
- Insured Pension Plan - A plan under which an employee's benefits are purchased with the contributions of either or both the employer or employee when those contributions are received by the insurance company or other underwriter legally authorized to sell annuities.

Joint and Survivor Annuity - An annuity payable until the death of the retired employee (principal annuitant) and continuing thereafter in full or (usually) in part, during the life of a surviving person (joint annuitant) such as a widow or widower. In some cases the annuity is reduced on the death of either the employee or the joint annuitant.

Locking-In - A requirement under legislation that an employee's and his employer's contributions on his behalf made to the pension plan after a certain date cannot be forfeited or paid as a cash withdrawal if the employee, on termination of employment, has attained a certain age and/or has completed a certain period either of service or of plan membership. For example, under the federal Pension Benefits Standards Act, contributions made since September 30, 1967 are locked-in after the employee has attained 45 years of age and has completed 10 years either of service or of plan membership.

Means-Tested Pension Plan - A public pension plan whose benefits are reduced as the current income and asset position of the recipient increases, e.g. the Old Age Pension Act of 1927, and the Old Age Assistance Act of 1951.

Money Purchase Plan - The most common form of defined contribution plan described above under which contributions made at the rate specified in the plan are placed to the credit of each member and the pension is whatever amount those contributions plus their earnings will provide.

Mortality Rate - The proportion of persons of given sex and age that die in a year, according to a particular mortality table. Not to be confused with the ordinary or crude death rate which ignores differences in age and sex.

Multi-Employer Plan - A pension plan covering employees of more than one employer.

Non-Contributory Plan - A pension plan in which all contributions are made by the employer.

Normal Pensionable Age - The earliest age at which a member of a pension plan may receive an unreduced pension or annuity on terminating employment for any reason other than disability.

Normal Retirement Age - The age at which employees normally retire from the service of the employer.

Past Service - Service by an employee that is recognized for the purpose of a pension plan but performed before the employee became a member of that plan.

Past Service Liability - A liability assumed by an employer in respect of benefits with respect to service rendered by employees before the introduction or amendment of a pension plan, whichever is relevant.

Pay-As-You-Go - When applied to a pension plan, a system of financing under which payments are made from ordinary current revenues or other sources external to the plan, there being no assets set aside explicitly for meeting its obligations.

Pension - An annuity, or in some cases a similar but non-contractual payment, paid to a retired employee. The term 'pension' is also applied rather than 'annuity' to the regular payments made under public pension plans where no contract has been entered into for the payment of a specific amount of annuity. See Annuity, Joint and Survivor Annuity.

Pension Benefits Standards - The requirements which a pension plan has to meet under the federal Pension Benefits Standards Act and similar provincial legislation.

Period of Deferment - The period, prior to commencement of pension, during which a deferred annuity is in force. The period ends either when the annuity starts to be paid, or when a death benefit becomes payable in lieu of an annuity.

Plan Termination - Discontinuance of an employer-sponsored pension plan by direct or indirect action, including bankruptcy of the employer. There are various requirements under Pension Benefits Standards legislation designed to protect the position of members of the plan when this occurs.

Portability - The word portability may be used in two quite different senses. The first refers to the vesting provisions (defined below) which grant to an employee the right to the portion of the deferred pension benefit that has accrued under the benefit formula. The second use is in relation to arrangements for the transfer of pension credits whereby an employee's pensionable service with a prior employer can be included in calculating the pension to be provided by a subsequent employer.

Pre-Retirement Consumption - Annual consumption levels in the pre-retirement period consisting of earnings plus government transfers minus income taxes, UIC premiums, C/QPP contributions, other pension plan contributions, work-related expenses, expenses of child-rearing and private saving (if any). These annual consumption levels are adjusted through the use of a discount rate and then averaged to yield 'Pre-Retirement Consumption'. (See Appendix 6.)

Private Sector Plan - An employer-sponsored pension plan which is offered by an employer in the private sector.

Profit Sharing Pension Plan - A pension plan of the defined contribution type where the contributions are a function of the employer's profits. If it is registered as a pension plan under the Income Tax Act a minimum employer's contribution of 1% of the remuneration of employees covered by the plan must be made each year.

Profit Sharing Plan - An arrangement under which payments computed by reference to profits from his business are made by an employer in trust for the benefit of his employees whether or not the employees contribute.

Public Pension Plan (State Plan) - A pension plan such as OAS or C/QPP provided by a government in its role as a government rather than in its role as an employer.

Public Sector Plan - An employer-sponsored pension plan which is offered by an employer in the public sector. For example, the plans for employees of federal, provincial and municipal governments, Crown corporations, school boards, etc.

Registered Pension Plan (RPP) - An employer-sponsored pension plan which, on meeting the requirements of the federal and provincial governments, has been accepted for registration (thereby qualifying for favourable tax treatment) under the Income Tax Act.

Registered Retirement Income Plan - A general term used to describe the various retirement income plans registered under the Income Tax Act including Registered Pension Plans, Registered Retirement Savings Plans, Deferred Profit Sharing Plans as well as the Registered Employee Pension Funds proposed in this report.

Registered Retirement Savings Plan (RRSP) - A savings for retirement plan approved under the Income Tax Act whereby taxes are deferred on the contributions and the income they earn until the savings are withdrawn.

Return of Contributions - See Cash Withdrawal.

Terminal Funding - A method of funding a pension plan whereby, instead of systematically building up a fund during the employee's period of service, the entire cost of providing a pension for each employee is paid into the pension fund at the time of that employee's retirement from service. This expression may also be used to describe the procedure when a plan is wound up or an employee with vested benefits terminates employment without retiring, and the contributions required to provide the vested benefits are provided. Funding of this type is not permitted under pension benefits standards legislation.

Termination - A severance of the relation between employer and employee, whether by deliberate withdrawal (quitting); by involuntary withdrawal owing to illness, accident, disability; or by discharge or lay-off not followed by rehiring. A generic term which includes severance for many causes other than death or retirement. See Termination Rate.

- Termination Rate - The proportion of employed persons of a given age that terminate their employment while they are of that age, for reasons other than death or retirement. The rates may be calculated with respect to (1) all those on a payroll, or (2) all those other than labour defined as casual, or (3) members of a pension plan only. (In non-contributory plans where most of the staff automatically become plan members, there may be no difference between (1) and (3).)
- Trusteed Pension Plan - A pension plan under which funds for future pension payments are placed in the care of a trustee who invests the funds or purchases annuities from a company authorized to sell annuities.
- Unfunded Liability - The amount by which the assets of a pension fund need to be augmented to ensure that the plan is fully funded.
- Unit Benefit Formula - A defined benefit formula that provides a unit of pension equal to a percentage of an employee's earnings for each year of participation in the plan. For example, see Career Average, Final Average and Final Earnings Benefits Formulae.
- Universal Pension - A public pension plan covering the entire population subject to certain conditions. See Demogrant.
- Updating of Deferred Pension - The periodic increase by an employer, usually in accordance with either a price or wage index, of the amount of a deferred pension to which a former employee is entitled.
- Vesting - The employee's right, on termination of employment before retirement under a pension plan, to all or part of the benefit that has accrued to the employee under the normal retirement benefit formula of the plan up to the date of termination of employment. The resulting benefit is usually paid under the plan as a deferred annuity at either the normal pensionable age or the normal retirement age. In the most limited context in which the expression is used, vesting means the acquisition by an employee, in the case of a defined benefit plan, of a legal claim to a deferred pension calculated according to the benefit and vesting formula of the plan. In the case of a defined contribution plan, vesting means the employee's acquisition of the legal claim to the percentage of the pension fund attributable to the employer's contributions in respect of that employee stipulated in the vesting formula. Although vesting must be 100%, or full, for employees who have attained age 45 with 10 years of service or participation under plans subject to the federal and six provincial statutes on pension benefit standards (see Locking-In) full or partial vesting may occur earlier, depending on the provision of the individual plan. Vesting more generous than required by legislation depends on the plan provisions. For example, if an employee with seven years of service leaves a contributory plan with a "five-year full-vesting" provision, he usually has the choice of receiving a return of his own contributions (usually with some interest) or a deferred annuity based on the seven years of service. Under a plan providing for Immediate Vesting an employee is immediately entitled to a full or

partial benefit (Partial Vesting) accrued to him under the benefit formula and the vesting provisions of the plan. The expression Graded Vesting is used to describe an arrangement whereby there is a gradual progression from no vesting through partial vesting to full vesting, of benefits accrued under the benefit formula. Graded vesting, for example could provide 10% of the accrued benefit after one year, increasing uniformly to provide at the end of 10 years 100% of the benefit accrued according to the benefit formula. See Delayed Vesting, Full Vesting, Locking-In.

MEMBERS OF THE TASK FORCE AND STEERING COMMITTEE ON RETIREMENT INCOME POLICY

Five people were Task Force members from the time of its establishment in late 1976 through to the time it was wound up in 1979. They were: H.D. Clark and Alan Puttee, both officers of the Department of Finance; E. Bower Carty, a consultant to the Department of Finance and previously an officer of Statistics Canada; James Paterson, a consulting actuary of Paterson, Cook Limited, Vancouver; and Harvey Lazar, an officer of the Treasury Board Secretariat on loan to the Department of Finance. Clark, Puttee and Lazar were full-time members. Carty and Paterson were part-time members. More recently, a sixth person, Michael Wolfson of the Department of Finance, has been actively involved on a part-time basis. Lazar headed the Task Force.

In the early phases of the Task Force work, Raymond Préfontaine of the Department of Finance, Bruce McKellips, then of the Department of National Health and Welfare, and Paul-Henri Lapointe, then of the Treasury Board Secretariat, were full-time Task Force members.

An interdepartmental Steering Committee of senior officials, with representation from the Departments of Finance, National Health and Welfare, Insurance and Labour, and the Treasury Board Secretariat and Privy Council Office, provided general direction to the Task Force on the scope and organization of its work. The Steering Committee was initially chaired by M.A. Cohen, then Assistant Deputy Minister, Department of Finance and, subsequently, by E.P. Neufeld, Assistant Deputy Minister, Department of Finance. T. Russell Robinson, then Assistant Deputy Minister, Department of National Health and Welfare, was vice-chairman during the early phases of the Task Force work.

The Task Force is responsible for the content of the report - the description and evaluation of the retirement income system and the delineation of the policy options. Where there were differences of opinion within the Task Force, the text reflects the consensus view among Task Force members.

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Laurence Coward, consulting actuary, of William Mercer Ltd., Toronto and James Pesando, consulting economist, of the University of Toronto, commented on an early draft of the report. Nicholas Rost Van Tonningen, consulting economist, did the same on a later draft. Irwin Pressman, a consulting mathematician, of Carleton University, assisted in the development and use of quantitative models. Bruce Macdonald provided editorial assistance in the writing of the final draft.

Walter Riese of the Department of Insurance and Brian Powell of the Department of National Health and Welfare coordinated the contributions of their departments; each also commented in detail on several drafts of the report. Art Veness and James Martin of the Department of National Health and Welfare, and George Poznanski and Jacques Frigon of the Department of Insurance, helped in the preparation of specific portions of the text. Mel Cappe and Guillaume Bissonnette, then officers of the Treasury Board Secretariat, also assisted with comments and suggestions.

Within the federal government, excluding those named above, a number of officials of the Departments of Finance, Insurance, National Health and Welfare, Labour and National Revenue and of the Privy Council Office, the Treasury Board Secretariat and Statistics Canada commented on early drafts of the report.

Other individuals prepared background studies on particular aspects of the retirement income system. Summaries of some of these studies are included in Volume 2 of the Task Force report. A list of other studies is available.

Donna Shulhan managed the Task Force office and was assisted in secretarial work by Jean Tattersall. Cathy Glandon typed the text.

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